# THE EFFECTIVENESS OF A MUSIC-BASED RELAXATION INTERVENTION AND A MINDFULNESS-BASED INTERVENTION DELIVERED ONLINE TO DECREASE HOSPICE WORKERS STRESS AND IMPROVE PROFESSIONAL QUALITY OF LIFE

by

Jennifer M. Fiore

M.M.E. (Music Therapy), University of Kansas, 2004
B.M.E. (Music Therapy), University of Kansas, 2001

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Dissertation Committee:

_____
Chairperson: Dr. Cynthia M. Colwell

_____
Dr. Deanna M. Hanson-Abromeit

_____
Dr. Abbey Dvorak

_____
Dr. Dena Register

_____
Dr. Tamara Mikinski

May, 2015
Date Defended

The Dissertation Committee for Jennifer M. Fiore

certifies that this is the approved version of the following dissertation:

THE EFFECTIVENESS OF A MUSIC-BASED RELAXATION INTERVENTION AND A MINDFULNESS-BASED INTERVENTION DELIVERED ONLINE TO DECREASE HOSPICE WORKERS STRESS AND IMPROVE PROFESSIONAL QUALITY OF LIFE

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Chairperson Dr. Cynthia M. Colwell

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ABSTRACT

**Background**: Work stress can develop over time due to strained interactions, increased number of job tasks, and heightened stressors from within the work environment. Hospice workers experience additional stressors such as exposure to frequent death and dying, and managing patient and/or family dynamics. Prolonged periods of stress can lead to burnout as a result of the interaction of emotional exhaustion, depersonalization, and reduced personal accomplishment. For workers, burnout can result in increased absenteeism and health problems, while employers are faced with increased healthcare costs and turnover. Development of coping skills is necessary to provide workers with outlets to manage stress and decrease the potential for job burnout.

**Objectives**: The purpose of the current study was to compare the effectiveness of an online music-based intervention and an online mindfulness-based intervention to decrease hospice workers' stress and increase professional quality of life.

**Method**: A total of 153 eligible hospice workers were randomly assigned to either the music-based intervention or the mindfulness-based intervention, with equal distribution of discipline representation between groups and were then solicited for participation in the current study. Participants ($N$=14) were hospice workers providing direct patient care with the music-based intervention group ($n$=10) and the mindfulness-based intervention group ($n$=4). The study was offered online so participants could engage in the intervention when needed or as schedules allowed.

**Results**: Due to the overall limited participation and unbalanced treatment groups, it was inappropriate for the researcher to conduct statistical analysis beyond looking at the

means and standard deviations of the measures for the purpose of understanding potential clinical significance. Participants in the music-based intervention groups had minimal decreases in mean Stress Overload Scale (SOS) continuous scores, SOS personal vulnerability, and Professional Quality of Life (ProQOL) for secondary traumatic stress, while having a minimal increase in ProQOL compassion satisfaction scores. Participants in mindfulness-based intervention group had only a minimal decrease in SOS personal vulnerability scores, which may suggest that the music-based intervention could be more effective in helping manage hospice workers' stress and improve professional quality of life, though results are limited due to sample size.

**Conclusions**: Due to the limited engagement in the current study, it is not possible to conclude if either an online music-based intervention or an online mindfulness-based intervention were effective for hospice workers' stress and burnout. Limited engagement could be related to overall high stress levels, excessive workloads, and little personal experience using online interventions for stress management. The results of this study suggest that repeated practice with a stress management intervention is necessary to see positive outcomes. As evidenced by the limited results of this study, dosage is an important consideration for future studies.

**Keywords**: Worker stress, burnout, Therapeutic Function of Music, online music-based intervention, online mindfulness-based intervention

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# CHAPTER I

## INTRODUCTION

The hospice movement in America has consistently grown since the 1970s, each year providing care to an increased number of terminally ill patients. In 2013, there were over 5,800 hospice programs in the United States, with an estimated 1.5-1.6 million patients utilizing hospice care, and 1,113,000 individuals receiving hospice services prior to their deaths (National Hospice and Palliative Care Organization [NHPCO], 2014). The daily mean hospice census in 2013 was 137.7 patients per hospice, with over 33% of the hospices providing care to over 100 patients each day.

Hospice services were provided to patients and family members by over 11,000 hospice and palliative care nurses, home health aides, social workers, chaplains, and other members of the interdisciplinary team. Of the 11,000 plus hospice and palliative care workers in 2013, 71.8% provided full-time direct patient care. Patient care caseloads vary according to discipline. Registered nurse case managers carried an average caseload of 11.2 patients, hospice aides averaged 10.7 patients, and social workers managed 25.2 patients on average. Higher patient censuses necessitate staffing increases in order to meet the ever changing needs of hospice patients and their families, and limit worker stress.

Due to the highly emotional nature of hospice work and the frequency of recurrent loss, hospice workers are at a higher risk for stress and burnout. Stressors-which can be either positive or negative-are any type of change that requires an individual to adapt (Davis, Eschelman & McKay, 2000). Each person's response to stress is influenced by his/her individual differences and the coping skills each possess. Stressors originate

from four sources including: (a) a person's own thoughts, (b) physiologic reactions, (c) social stressors, and (d) the environment (Davis, Eschelman, & McKay, 2000). Within the hospice setting there are two prevailing factors that influence a worker's stress: a strong identification with the hospice philosophy, and sustaining a high level of engagement with patients and families on a daily basis (Munley, 1985).

Work stress can stem from multiple sources. Hospice workers experience three types of stress within the job setting including: (a) stress induced by the patient or family as they balance empathy with their level of involvement with the patient, family dynamics, or family grief responses; (b) stress embedded within the job tasks such as frequent driving, and personal risks (e.g., interactions with animals); and (c) stress from working in the hospice environment as workers interact with multiple terminally ill patients and families concurrently and risk becoming overly attached while providing care (Keidel, 2002). Furthermore, another type of stress related to the hospice environment can stem from tense staff interactions with colleagues and management. Feeling unsupported and not understood by upper management, which results in a perceived lack of support for their work, can intensify the already stressful environment.

In addition to work stressors, personal stressors also impact the perception of work stress. Personal stressors can include frustrations with the healthcare system, lack of personal support or coping skills, or societal pressures. Building on these stressors is the societal perception that death is a result of failure by the medical system (Keidel, 2002). Based upon the nature of work within the hospice setting, hospice workers are subject to

recurrent loss, and over time multiple losses can result in death itself becoming an additional work stress (Payne, 2000).

Consistent exposure to personal and work stressors can result in burnout. Burnout is "a syndrome of physical exhaustion including a negative self-concept, negative job attitude, and loss of concern and feeling for patients" (Keidel, 2002, p. 200). Burnout is the result of extreme stress, and impacts both physical and mental health (Keidel, 2002; Payne, 2000). Burnout includes exhaustion, depersonalization, and reduced personal accomplishment, and can also include cynicism for people working in helping roles (Maslach, 1976; Maslach & Jackson, 1981). Within the hospice setting, burnout can be seen in workers as excessive emotional exhaustion, high depersonalization of patients, and a low sense of personal accomplishment at work. Behaviors indicating burnout include: (a) blaming others, (b) an overly short temper, (c) a short attention span, and (d) decreasing engagement in positive interpersonal relationships (Keidel, 2002).

The number of stressors, length of time under high levels of stress, and severity of symptoms determine the level of burnout (Keidel, 2002). For employers, burnout increases operational costs due to absenteeism, staff tension, and increased rates of job turnover (Maslach, 1976). Frequent staff turnover increases the need to educate and train new staff, and also creates higher healthcare costs for work-related medical conditions due to stress (Happell, Dwyer, Reid-Searl, Burke, Caperchione, & Gaskin, 2013). Burnout could be viewed as the difference between a person's expectation of his/her work role, and the employer's expectation of the worker's role within the structure of the company (Sabo, 2006). Previously, Payne (2000) determined burnout was related to work

stressors and the use of coping skills, with work stressors impacting burnout, though overall workload was not linked to burnout. This finding indicates that higher workloads can be managed through the use of coping skills to diminish the risk of burnout. Without adequate and effective coping skills, over time burnout decreases a worker's quality of life, and can result in workers leaving the field.

Worker quality of life requires a balance between compassion satisfaction and compassion fatigue. Compassion is the feeling of concern for others, and an awareness and personal desire to help those who are suffering (Sabo, 2006). Furthermore, compassion can be conceptualized as an emotion sustained over a long period of time, and can exist without feeling (Stamm, 2005). Compassion satisfaction (CS) is a pleasurable feeling in response to a job well done. When working with clients, CS is a result of workers observing positive changes in the client. CS can be influenced by optimism, positive affect, social supports, and being in good health (Radley & Figley, 2007).

The term compassion fatigue (CF) was coined by Carla Johnson in 1992, and has been viewed as a combination of Secondary Traumatic Stress (STS) and burnout due to providing care to others who are suffering (Figley, 2002; Keidel, 2002). CF is the emotional result of providing care to those who are suffering or have been traumatized (Figley, 2002). Sabo (2006) viewed CF as an emotional interaction of three elements: (a) a person's response corresponds to their actual or anticipated emotion; (b) counter-transference when a worker unconsciously becomes involved in a client's suffering; and (c) burnout resulting in a gradual decrease in personal resources due to an imbalance in

expectations and outcomes at work. The occurrence of CF is more common for healthcare workers than other professionals, with 78% of hospice workers being at a moderate risk for CF (Yoder, 2010).Women are at a higher risk for CF and burnout than their male counterparts (Sprang, Clark, & Whitt-Woosley, 2007). Research suggests women are more likely to work in higher stress environments than men due to women being able to respond to stressful or traumatic situations with less conflict and aggression (Barling, Dupre, & Kelloway, 2009).

Compassion fatigue has also been linked with certain personality traits, and may also be influenced by personal stressors. People who are overly conscientious, perfectionists, self-giving, and are more vulnerable are most susceptible to developing compassion fatigue and burnout. A worker who is highly vulnerable may become overly involved and devoted in caring for patients and/or family members, and thus experience greater loss from the death of the patient and the loss of interacting with the family. These feelings intensify when relationships are terminated (Keidel, 2002). Research also indicates that mood states such as anxiety and depression increase a workers' risk for stress and burnout in the workplace (Brief & Weiss, 2002). Yoder (2010) found that certain situations could trigger CF in nurses', with triggers being specific to each individual. Possible triggers include: (a) providing constant care to patients, (b) the need to prioritize job tasks, (c) managing care for multiple patients who are near death, and (d) personal issues in providing care to a patient of similar age (Yoder, 2010).

A higher level of compassion fatigue increases the risk for workers to have job burnout. A workers inability to manage relationships in either a personal or professional

environment can also be a sign of worker burnout and increases the risk for CF. Burnout and CF can also manifest in physical behaviors such as anxiety, insomnia, headaches, depression, or panic attacks (Deckard, Meterko, & Field, ed1994; Srivastava et al., 2007). These physical responses can impair a worker's ability to sleep, resulting in increased fatigue and the possibility of making more medical errors which impacts the quality of care delivered to patients and families (Owens, 2001). Although CF is impacted by personal influences, an individual's assessment of the work environment and its associated job demands also contribute to CF.

The work environment itself can be stressful, contributing to worker burnout (Plante & Bouchard, 1996). The distinctive environment of hospice work provides additional unique stressors due to job tasks, hours worked, level of autonomy, and recurrent loss due to death of patient experienced on an ongoing basis. Hospice work is riddled with fluctuating levels of patient care needs related to the physical decline of patients, working overtime or being on-call at night, driving in unfamiliar areas, and completing job tasks that are not considered "normal" such as drawing blood, witnessing someone dying, or managing family dynamics (Keidel, 2002). Other personal stressors contributing to burnout include fatigue, emotional interaction, cognitive demands, and autonomy within the job (Sisley, Henning, Hawken, & Moir, 2010). Heavy workloads requiring long work hours, paired with an unsupportive work environment due to the employer's work structure, and failure to meet personal goals within the work setting also impact the level of burnout (Sisley et al., 2010; Yoder, 2010). Stressors specific to nurses include lack of availability of doctors, unsupportive management, human resources

issues, patient family interactions, patient's mental health, and shift work (Happell et al., 2013). The work environment paired with compassion fatigue, personality traits, and personal stressors all impact stress appraisal and the potential for burnout.

An individual's assessment of stressful events impacts his/her response and the potential for burnout in the future. Each individual perceives stressors differently, and the stress source can stem from a person, work environment, or a combination of both (Sisley et al., 2010). Multiple theories and models address work-related stress. The Demand-Control Theory suggests that stress related to job task demands can be improved when workers feel a sense of empowerment in the work environment (Baker, 1985). The Person-Environment Fit Model indicates that stress occurs when unnecessary pressure is felt as the result of a job task or work environment condition (Blix & Lee, 1991).

Lazarus and Folkman (1984) discussed three types of stress including: (a) individual stress; (b) environmental stress; and (c) a Transactional Model that looks at the interplay between the individual and the environment. Stress occurs when the demands upon the individual are greater than the individual's resources can handle. Stress appraisals can be seen as (a) benign; (b) a threat of stress in the future; (c) harm or loss; or (d) a challenge. Individuals employ multiple approaches to cope with the stressors (Lazarus & Folkman, 1984). Secondary appraisal evaluates the individual's ability to control the degree of stress in a situation, while a tertiary appraisal occurs after the stressors ends, allowing an individual to assess the impact and/or meaning of the stressful event in his/her life. Lazarus and Folkman's Transactional Model is appropriate for the hospice setting as it accounts for both individual and environmental stressors.

Management of both stressor types is necessary to maintain a high level of function in the work environment.

In order for individuals to maintain adequate functioning in high-stress environments, coping skills need to be developed and retained. Coping skills can be direct or indirect, and can also include workplace interventions. The direct approach is used when the individual tries to change what he/she can do to decrease work-related stress (Keidel, 2002). Conversely, an indirect approach is used to accept work stressors, and adapt to the stressors in order to cope with what cannot be controlled within the work environment. Workplace interventions can include stress inoculation training, the development of counseling skills to manage family and staff conflicts, and the employer monitoring conflict. Hospice staff have indicated objective evaluation of the work environment, awareness of the tendency to be over-involved with patients and families, asking for help, seeing tasks as challenges rather than hassles, adapting to the job demands, seeking social support, and finding a balance between work and home life were most important to effectively cope with work-related stressors (Keidel, 2002).

Development of coping skills is essential to decrease the risk of compassion fatigue and burnout for hospice workers. Coping can be problem-focused to target the source of the stress such as planning ahead, using positive reappraisal, and seeking out social support; or emotion-focused to manage the emotional response to the stress such as rumination, confrontation, or negative appraisal. The use of problem-focused coping has shown to decrease burnout potential (Ceslowitz, 1989; Chiriboga & Bailey, 1986). Nurses using problem-focused coping experienced less burnout, and those using emotion-

focused coping had greater levels of burnout. Boyle, Grap, Younger, and Thornby (1991) concluded that a blended use of both problem-focused and emotion-focused coping could be best when choosing the coping style in response to the environment and the problem.

Within the hospice setting, negative coping strategies can include avoiding the problem or person, becoming more intense in providing patient care, limiting the number of days worked, or leaving the organization or profession entirely (Yoder, 2010). Modifications of the work environment can enable better coping among staff in the workplace. These modifications can include: (a) breaks, (b) massage, (c) use of music, (d) increased acknowledgement from upper level management, and (e) improved leadership among the clinical team (Happell et al., 2013). Development of coping skills for hospice workers is essential in order to decrease the negative effects of stress, combat compassion fatigue, and limit burnout.

The use of mindfulness meditation or music listening could be used to decrease the risk for burnout and compassion fatigue. Mindfulness based stress reduction (MBSR) was developed by Jon Kabat-Zinn based on Buddhist and Eastern practices of mindfulness meditation. Kabat-Zinn coined the term mindfulness, with individuals focusing attention on the present-moment and being open and non-judgmental to what is brought up during meditation (Kabat-Zinn, 1994). The goal of mindfulness meditation is for the individual to become aware of the stressors, thoughts, or uncomfortable feelings in the moment, and use focus to change his/her response to the stressor. Beginning practices of mindfulness typically emphasizes a focus on the individual's breathing

(Davis et al., 2000). Mindfulness meditation could be used by hospice staff during their shifts as a way to manage stress and develop positive coping skills.

Music for relaxation is another approach hospice staff could use to manage stress and further develop their repertoire of coping skills. Music may be useful in decreasing the cognitive component of the stress response (Burns et al., 2002). Consideration of the impact of each individual musical element such as tempo, meter, instrumentation or melodic line should be considered to determine the use of a particular piece of music for relaxation. Several studies indicate guidelines for particular music elements (Elliott, Polman, & McGregor, 2011; Robb, Nichols, Rutan, Bishop, & Parker, 1995; Schneck & Berger, 2005; Suda, Morimoto, Obata, Koizumi, & Maki, 2008; Wolfe, O'Connell, & Waldon, 2002; Yehuda, 2011), which is further discussed in the review of literature. The use of preferred music for relaxation is not required as Pelletier (2004) found that music chosen by the researcher was more effective in reducing stress levels than music chosen by individual participants.

Work stress can develop over time due to strained interactions, an increased number of job tasks, and stressors from within the work environment. Hospice workers experience additional stressors such as exposure to frequent death and dying, and managing patient and/or family dynamics. Prolonged periods of stress can lead to burnout, the interaction of emotional exhaustion, depersonalization, and reduced personal accomplishment. For workers, burnout can result in increased absenteeism and health problems, while employers are faced with increased healthcare costs and turnover. Development of coping skills is necessary to provide workers with outlets to manage

stress, and decrease the potential for job burnout. The purpose of the current study was to compare the effectiveness of an online, self-initiated music-based intervention and an online, self-initiated mindfulness-based intervention to decrease hospice workers' stress and compassion fatigue, potential factors leading to burnout.

# CHAPTER II

# REVIEW OF LITERATURE

Hospice workers have a high risk for professional burnout due to the personal and environmental stressors related to working in hospice. Hospice workers manage large caseloads, work autonomously, manage patient and family needs and dynamics, and are faced with terminal illness and the dying process on a daily basis. Over time, prolonged periods of stress can lead to professional burnout. The current review begins with defining work stress and burnout, how work stress impacts both the worker and the employer, and the theories of work stress and bereavement. Without intervention, hospice workers will continue to experience prolonged stress which can impact a workers personal and professional quality of life. Coping skills are essential to effectively manage stress in order to remain effective in a professional caregiving role. The second half of the review focuses on the use of coping skills to manage work stress, specifically focusing on music-based relaxation interventions and mindfulness-based interventions in order to manage work stress and burnout. The purpose of this study is to compare the effect of an online music-based intervention with an online mindfulness-based intervention to decrease hospice workers stress and subsequent professional quality of life.

## Workplace Stress

The workplace presents cognitive, emotional, physical, and psychological stressors. The World Health Organization (WHO) has determined work-related stress to be prevalent worldwide (Riahi, 2011). WHO defines work-related stress as a person's response when work demands and pressures are beyond an individual's knowledge and

skill set, which tests his or her ability to cope with the presented job demands ("Work-related stress," n.d.). Job demands relate to the amount of work to be completed, and the necessary requirements and time constraints, while job control is a worker's designated ability to make decisions in the workplace (Huang, Chen, Du, & Huang, 2012). Job demands and job control determine the severity of job strain experienced. Snyder, Krauss, Chen, Finlinson, and Huang (2008) defined job strain as mental fatigue from the work setting that results in "poor psychological and physiological well-being" (p. 1714). A worker experiencing increased job strain can develop cynicism which is being unengaged or distant toward work and co-workers, and results in individuals feeling a loss of meaning in the workplace (Huang et al., 2012).

Work stress can stem from a variety of sources, with stressors originating from four categories, and categories becoming more distal from the worker's primary responsibility or physical workspace The first category includes stressors from the physical work environment that include physical hazards such as temperature extremes, excessive noise, physical exertion or ergonomics required to complete the job task, which can result in physiological stressors such as increased heart rate, pulse and respiration rate. The next category includes stressors related to the actual job content. Examples of job content stressors could include workload, the ability or authority to make decisions, deadlines, job pace, or mandatory overtime. The third category includes organizational factors such as the company structure, the worker's role within the company, and the transparency of the worker's responsibilities and expectations (Baker, 1985). Without clear expectations, a worker can experience role conflict, and uncertainly about his/her

place within the larger organizational structure. The last category outlines extra-organizational stressors related to work such as commuting or experiencing sleep disturbances due to shift work. Individual workers can experience one or more categories of stressors, as well as any number of specific stressors within each category. While each job has its own stressors, hospice work presents unique stressors based on the variable work environment and the caregiving role.

Hospice workers are subjected to multiple job stressors on a daily basis. Beyond the stressors experienced in more traditional work environments, the hospice work environment has its own elements that can impact stress levels. Patient centered care provided at the end-of-life requires hospice workers to manage an ever-changing work load, triage needs among patients, navigate large service areas, and deal with conflicts that can arise among the staff, patient, and/or family members (Gray-Toft & Anderson, 1981). A survey of Registered Nurses (RN) indicated that 95% of RNs reported other RNs to be the primary source of verbal abuse 27% of time, and patient families contributing 25% of nurses' verbal abuse (Rowe & Sherlock, 2005). Additionally, staff can experience role ambiguity as their role can shift dependent on the needs of the patients and families. Within the hospice setting staff experience death recurrently as part of the job, which can impact their spiritual beliefs both positively and negatively. Patients and family members can also have spiritual concerns that require attention from hospice workers, with the possibility of conflicting beliefs and values. Managing stressors on a daily basis can impact hospice worker's compassion satisfaction when providing care to patients and families and can lead to compassion fatigue.

## Professional Quality of Life

**Compassion satisfaction and compassion fatigue.** Compassion satisfaction (CS) relates to the positive aspect of a professional's quality of life, and is the positive feeling or gratification experienced from helping those in need, or in doing a job well (Stamm, 2005). Yoder's (2010) mixed-methods study examined compassion satisfaction and compassion fatigue in nurses with use of the Professional Quality of Life Scale (ProQOL), and two qualitative questions. Results revealed that professionals working less than 10 years had higher levels of compassion satisfaction than coworkers with 10-19 years of experience. This indicates CS may decline with increased number of years worked. Furthermore, professionals who had greater amounts of compassion satisfaction from work felt more interpersonally satisfied, had more social support, and were better able to avoid engaging in negative rumination.

In contrast to compassion satisfaction, compassion fatigue (CF) is the negative emotional response from helping others, and was first labeled by Johnson in 1992 (as cited in Figley, 2002). CF is more common in healthcare settings due to caring for patients, with 78% of hospice nurses being at moderate risk for developing compassion fatigue (Yoder, 2010). CF involves exhaustion that can be across the emotional, physical, social and/or spiritual domains, and can lead to a gradual decrease in a worker's desire, ability, and energy to provide care to others (Gilmore, 2012). CF has an acute onset which occurs after experiencing a patient's traumatic event (Sabo, 2006), and can be categorized into two sub-concepts: The first is burnout, with professionals feeling "exhaustion, frustration, anger or depression" (Stamm, 2005, p. 8). The other is

Secondary Traumatic Stress (STS), which is the development of negative emotions related to fear and trauma from work, and is differentiated from burnout due to the presence of fear (Stamm, 2005). Yoder (2010) used the Professional Quality of Life Scale (ProQOL) to measure CF in nurses, and found that events or circumstance that trigger CF are individualized, with possible situations including: system issues such as prioritizing death related needs, personal issues such as being the same age as a patient, and providing patient care. Hospice workers are at greater risk for developing compassion fatigue, which may be related to personality characteristics that draw them to providing care to others.

Personality characteristics can impact the development of burnout in the professional setting. A questionnaire was developed to measure healthcare workers need for recovery from stress, negative affect, an inability to withdraw from work versus continuing to engage in work, activities outside of work hours, and coping, with measures taken over a two-year period through use of pre and post measures (Van Veldhoven & Daalen, 2010). Results indicated job demands were not significantly related to a workers' need for recovery. Instead, the inability to withdraw from work had the greatest impact on the need for recovery, especially for women. Recovery was found to be dependent upon a worker's personality and coping skills. Overcommitment at work can negatively impact health, and can influence the balance between work effort and work reward (Peter et al., 1998). Workers with insufficient coping skills and the inability to withdraw from work are at greatest risk for developing burnout.

**Professional Burnout**

Prolonged periods of compassion fatigue, paired with lowered compassion satisfaction, can lead hospice workers to professional burnout. The concept of burnout developed in the 1950's as an occupational hazard, and was further defined by Freudenberger (1974), to account for worker's responses to chronic stress in professions providing direct care to others (Freudenberger, 1974). While stress symptoms impact an individual short-term, burnout has long-term effects (Awa, Plaumann, & Walter, 2010). Maslach (1976) identified three components of burnout: (a) emotional exhaustion; (b) depersonalization; and (c) reduced personal accomplishment. Emotional exhaustion is exhibited when workers feel they have no energy, and have no additional resources to help them cope with work stressors. Depersonalization or cynicism occurs when workers are less attentive to work tasks and distance themselves from coworkers. Lastly, reduced personal accomplishment arises when workers negatively assess their ability to function at work (Huang et al., 2012).

The primary factors for developing burnout include a disparity between job demands and job skills, perceived or actual lack of control within the job, and prolonged periods of stress (Bakker, Demerouti, & Verbeke, 2004). Workers engage in citizenship behaviors of either in-role or extra-role performance within the workplace. In-role performance includes required tasks outlined by the employer to meet the organization's objectives, while extra-role performance are optional behaviors of the employee that encourage effective functioning in the workplace without the explicit intent to increase a person's productivity (Bakker, Demerouti, & Verbeke, 2004; Plooy & Roodt, 2010).

Huang et al. (2012) conducted a two-wave panel study looking at the casual relationship between job characteristics, burnout and psychological health over six months. To better understand the possibility of causal relationships, the Drift Hypothesis and True-Strain Stressor Hypothesis were examined. The Drift Hypothesis suggests workers who are burned out move to less favorable jobs which can create more job demands, or employees who are exhausted fall behind expected work demands, ultimately increasing work demand and work pressure (Kohn & Schooler, 1983). Workers who perceive increased job stressors may also have emotional and mental health needs, which over time would indicate a causal relationship of strain on stressors (Zapf, Dormann, & Frese, 1996). Conversely, the True-Strain Stressor hypothesis suggests stressors may also impact strain (burnout), and that a reverse relationship is possible. Results reported by Huang et al. (2012) indicated that a workers' job demand and job control at pre-test was directly related to psychological health at post-test. Furthermore, workers who exhibited low work effectiveness pre-test, perceived themselves to have less job control at post-test. Researchers concluded that the findings suggest a normal and reverse causal relationship between job characteristics and psychological health, with each variable impacting the other for burnout potential.

Payne (2000) surveyed 89 female hospice nurses and nursing assistants to determine the most prevalent stressors specifically related to the hospice setting, and the extent of burnout compared to nurses in other healthcare settings. Death and dying was the most frequent stressor experienced, with other stressors including: workload, insufficient support, inadequate preparation, conflict with doctors, and ambiguity related

to the treatment process (Payne, 2000). Burnout scores for hospice nurses were low, especially for emotional exhaustion and depersonalization compared to findings from studies in other healthcare settings. Payne concluded burnout was related to work stressors and use of coping strategies, and not specifically workload, as some stress increases functioning in the work setting. Furthermore, work stressors (e.g., death and dying, staff conflicts, inadequate preparation) were found to have the greatest impact on burnout. Finally, Payne indicated that levels of personal accomplishment at work related more to the individual than the work environment, indicating the impact of personality on personal accomplishment.

The impact of stress affects all aspects of an individual's life, and increases the risk for burnout. Baker (1985) identified three domains, including physiological, psychological, and behavioral effects. Physiological effects include increases in both heart rate and/or blood pressure, which can lead to developing heart disease, hypertension, and ulcers. Psychological effects relate to cognitive changes such as decreased job satisfaction, boredom, anxiety, depression, or somatic symptoms such as headaches or vertigo. Behavioral effects due to stress include decreased productivity, absenteeism, an increased number of work errors, and smoking or substance abuse. Chronic stress can also lead to neurobiological changes in the brain, with research indicating the pattern of change is similar to depression (Hill, Hellemans, Verma, Gorzalka, & Weinberg, 2012). Stress similar to depression can result in a "dysregulation of brain regions and structures, including the prefrontal cortex, limbic system, amygdala,

hippocampus, and the hypothalamo-pituitary-adrenal axis" (Edenfield & Saeed, 2012, p. 137).

### Impact of Stress on Employers

The consequences of stress go beyond the individual; it also affects employers. According to the American Institute for Stress, job stress costs US companies over $300 billion annually in accidents, absenteeism, turnover, decreased productivity, and increased healthcare costs. Wolever, et al. (2012) found that workers with high levels of stress had lower levels of productivity and higher medical costs compared to employees who report normal stress levels. Work interfering with family was a stressor for 80% of women, which was also related to exhaustion (Blau, Tatum, & Ward-Cook, 2003). In addition to stress impacting overall health, it also affects the quality of care provided to patients by healthcare workers (Riahi, 2011), which in turn has a direct impact on the employer. Rosenberg (2014) used the Practice Environment Scale (PES) of the Nursing Work Index to measure the impact of the home-health work environment on patient outcomes, rating work environments as poor, mixed, or better. Results indicated that home-health work environments rated "better" had lower rates of burnout among nurses, fewer acute care hospitalizations, and more frequently discharged patients to community living arrangements. The impact could also be seen with each standard deviation of the PES resulting in a 2% decrease in hospitalizations, and a 3% increase in discharges within the community.

## Models and Theories of Work Stress

Several work stress theories have been developed since the recognition of job stress in the 1970s including Demand Control Theory, Conservation of Resource Theory, Person Environment Fit Model, Effort-Reward Imbalance Model of Job Strain, and Job Demand Resource Model. The Dual-Process Model of Coping with Bereavement is also discussed, transferring the model from spousal loss to loss experienced by hospice workers.

**Demand-Control Theory.** The Demand-Control Theory is the oldest and one of the most prevalent theories used to explain the relationship between work and stress. Developed in 1979 by Karasek, the Demand-Control Theory posits that strain occurs when individuals simultaneously have high job demands and low job control. Individuals who make their own decisions on how to meet the job demands experience less strain than individuals who have less control at work (Karasek, 1979). Empowerment and the ability to make decisions moderate the perceived level of stress experienced (Sisley et al., 2010), assuming that job tasks are the primary sources of stress (Baker, 1985). The theory has three types of demands (time, monitoring, and problem-solving) that consistently impact the work environment (Karasek & Theorell, 1990). Within the Demand-Control Theory, work environments are scored, evaluating the balance between job demands and job control. The levels include: (a) strained environments have high job demands and low job control; (b) active environments have high job demands and high job control; (c) passive environments have minimal job demands and little job control; and (d) relaxed jobs have few demands and no job control (Baker, 1985). Since job control impacts the

perception of job demands, strain only occurs when there is high job demands and low job control (Van Vegchel, De Jonge, & Landsbergis, 2005).

In response to conflicting research findings regarding the Demand-Control Theory, Beehr, Glaser, Canali, and Wallwey (2001) investigated the correlation of demand and control with psychological strain. Problem-solving demands were significantly associated with psychological strain, while time demands were associated with turnover and slightly associated with psychological strain. Demand-control theory was found to be ineffective in understanding the interaction of job demands and control within a job, which impacts job satisfaction, retention, and motivation. Job control was associated with job satisfaction. The outcomes of the study by Beehr et al. (2001) do not support the Demand-Control Theory as the outcomes demonstrate the interaction of job demand and control are predictors of job strain. To further illustrate the limited support for the Demand-Control Theory, an earlier study by Van Der Doef and Maes (1999) examined the relationship between the Demand-Control Theory and psychological strain. Their review encompassed 63 studies between 1979 and 1997, but only 15 studies demonstrated partial support for the theory, and only 31 of the 63 hypothesized support. Beehr et al. (2001) also noted that the Demand-Control Theory indicates three types of demands, though Karasek primarily measured only time pressure demands in his research.

**Conservation of Resources Theory (COR).**

The Conservation of Resources Theory (COR) was established by Hobfoll in 1989, indicating that individuals feel strained when their resources are endangered, lost, or they

are unable to successfully increase resources when attempted. Resources can be "objects, personal characteristics or personality, conditions such as social support, or energies such as money" that are important to an individual (Alarcon, 2011, p. 14). Individuals with more demands and fewer resources will develop maladaptive coping. Over time maladaptive coping leads to burnout and reduced job satisfaction. According to COR, the burnout progression begins with emotional exhaustion that leads to the development of cynicism as a maladaptive coping mechanism. The use of maladaptive coping for prolonged periods of time decreases an individual's personal accomplishment, which results in burnout. A review of existing literature concluded that role ambiguity, role conflict, workload, and turnover were all positively related to emotional exhaustion, cynicism, and decreased personal accomplishment. Conversely, control and autonomy were not associated with emotional exhaustion, cynicism, or decreased personal accomplishment. Furthermore, results indicated that an individual's resources, job demands, and organizational attitude of his/her employer were related to the facets of burnout (i.e., emotional exhaustion, depersonalization, and reduced personal accomplishment). The studies analyzed in the meta-analysis indicated that role ambiguity, role conflict, and workload were significantly associated with burnout, supporting the COR Theory because the workers' demands exceeded their available resources (Alarcon, 2011).

**Person-Environment Fit Model.** The Person-Environment Fit Model focuses on the interaction between the person and the environment (Kristof, 1996). In this model, strain is due to an imbalance between the drives of the person (e.g., income, participation,

self-utilization) and the job environment, or between the job demands (e.g., workload, job complexity) and the individual's ability to meet the demands (Baker, 1985). The Person-Environment Fit Model differentiates between the objective (based on observation) and subjective environment (self-perceptions), assuming that strain occurs when the subjective person and the subjective environment do not fit or match. The subjective environment being influenced by self-perception may result in an accurate or inaccurate appraisal of the environment. The drawback of the Person-Environment Fit model is its limited ability to predict what job tasks will lead to stress.

**Effort-Reward Imbalance Model of Job Strain (ERI).** Siegrist's Effort-Reward Imbalance Model of Job Strain (ERI) differs from other models in its emphasis on the reward from work instead of control over the work environment (Siegrist, 1996). Strain occurs when individuals have high levels of job effort (e.g., extrinsic job demands and intrinsic motivation to fulfill demands), and low levels of job rewards (e.g., salary, professional esteem, opportunities) (Van Vegchel et al., 2005). The ERI also differs from other models with the inclusion of a personal element: overcommitment, which is demonstrated through excessive attitudes, behaviors, and emotions while simultaneously seeking approval and professional esteem (Bakker & Demerouti, 2007). Individuals who are overcommitted and also experience high job effort and low job rewards are at a higher risk for effort and reward imbalance, resulting in burnout, which leads to health related issues (Peter et al., 1998).

**Job Demands-Resources Model (JD-R).** The Job Demands-Resources Model was developed to incorporate aspects of both the Demand-Control Theory and the Effort-

Reward Imbalance Model of Job Strain (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001). The main premise of this model states that every job or profession has its own risk factors or demands that lead to job stress. Job stress risk factors can be separated into two groups. The first group includes job demands such as physical, psychological, social, or organizational factors requiring sustained physical and/or psychological effort/skill which leads to physiological or psychological consequences. The second group includes job resources such as physical, psychological, social or organizational aspects of the job that are: (a) useful towards meeting work goals; (b) lower job demands and related physiological and psychological consequences; or (c) encourage personal growth, education, and development (Bakker & Demerouti, 2007).

Additionally, the model also relates back to the COR theory, indicating that resources need to be increased and maintained to limit job demands. Job resources can be found at four levels: (a) organizational level including salary, job security or professional opportunities; (b) interpersonal and social relations such as support from co-workers, interdisciplinary teams; (c) organization of work which includes role clarity and job control; and (d) task level including autonomy, performance feedback, and individual skill sets. Bakker and Demerouti (2007) discuss a second component of the JD-R model being a balance between job strain and motivation that requires two psychological processes. The first process is health impairment, occurring when job demands remain high over a prolonged period of time and deplete an individual's resources (mentally and physically), which lead to exhaustion and finally health problems. The second process is motivational (intrinsic or extrinsic), with the premise that existing job resources increase

an individual's engagement and performance at work, while simultaneously decreasing cynicism as a maladaptive coping mechanism. Three variables can alter the perception of work stress including: (a) the degree of predictability for the stressor to occur; (b) the degree an individual understands why the stressor exists; and (c) the degree of control an individual has over the stressor (Kahn & Byosserie, 1992). The JD-R model provides more flexibility in its interpretation compared to other models. T**o** account for the loss of life component specifically associated with hospice work, it is necessary to examine a bereavement model that can transfer to hospice workers as the literature has shown that it is the most prevalent stressor (Payne, 2000).

Relating the JD-R model specifically for hospice workers, job demands could include physical demands such as repositioning or transferring patients from one space to another, or transporting durable medical equipment. Psychological job demands primarily stem from the repeated exposure to patients' terminal decline and eventual death, which results in recurrent loss for hospice workers. Additionally, hospice workers have to manage multiple stress (e.g., personal family, workload, patients' families). Social job demands could relate to the potential negative connotation of hospice work either by a workers peer group, or the patient and/or patient's family members that do not support the hospice philosophy. Lastly, organizational job demands could account for changes in Medicare guidelines that impact service delivery or charting, staff issues, decreased educational opportunities, or changes in agency benefits. In balance to the job demands, job resources are also considered within the JD-R model, and also can be specifically related to hospice work. Job resources that would help workers meet goals, lower job

demands, and encourage growth could include the availability of continuing education classes, support provided among hospice workers through an interdisciplinary team approach, and agency benefits which could include mental health resources for coping with recurrent loss or personal stressors.

**Dual Process Model of Coping with Bereavement.** The Dual Process Model of Coping with Bereavement (DPM) was developed by Stroebe and Schut in 1999 to more adequately describe the bereavement process for spousal loss; it can be adapted to describe the bereavement experience for other types of loss (Wijngaards et al., 2008; Roundhill, Williams, & Hughes, 2007), including losses experienced by hospice workers. The DPM blends stress and coping models including the Cognitive Stress Theory (Lazarus & Folkman, 1984) and the Stress Response Syndrome (Horowitz, 1986) with two bereavement theories, Rubin's Two-Track Model of Bereavement (1981) and the Model of Incremental Grief (Cook & Oltjenbrun, 1998). The integration of these four models led to the concept that bereaved use both loss-oriented (LO) and restoration-oriented (RO) coping. LO coping addresses rumination and traditional grief work, which RO coping relates to secondary sources of stress due to the loss, and identity and role changes as a result of the loss. Moving between the two processes is called oscillation, a concept similar to Parkes' Psychosocial Transitions Model which describes the balance between loss due to death and gains due to positive changes (Parkes, 1993).

Stroebe and Schut updated the DPM in 2001 to include positive and negative reappraisal. Outcomes from Folkman and Moskowitz (2000) demonstrated association between coping and caregiver affect, with caregivers using both problem-focused coping

and positive reappraisal. Problem-focused coping allowed caregivers to have opportunities for control and mastery, while positive reappraisal focuses on positive events or personal growth. Folkman and Moskowitz concluded that positive affect increases problem- and emotion-focused coping during prolonged periods of stress.

Richardson and Balaswamy (2001) interviewed 200 widowed men to understand the factors that helped best during the second year of bereavement. Results indicated that widows used both LO and RO coping skills, with RO coping being used more frequently later in bereavement, and significantly increasing widows positive affect. Outcomes from this study can be applied to hospice workers as it demonstrates the need to use both LO and RO coping, including accessing social support, which is seen as the most beneficial protective factor for effective coping and adaptation to loss (Bakker & Demerouti, 2007; Richardson, 2006). A later study by O'Shaughnessy, Lee, and Lintern (2010) analyzed responses from semi-structured interviews with spouses regarding caregiving. Their analysis showed four themes present in the interviews including: a) feeling connected to and separated from the deceased; b) feeling stressed in balancing needs for self and spouse; c) the uncertainty regarding the future; and d) needing to feel in control of something. In applying these outcomes for hospice workers, a possible transfer of the outcomes could be: a) feeling connected to and separated from the deceased and/or family after the professional relationship has ended; b) feeling stressed in balancing the needs for the patient/family and the worker's own needs; c) uncertainty of the future for the bereaved family members; and d) feeling a need to control an aspect of their work environment as a way to manage stress and recurrent loss.

An interaction of job demands and outcomes has demonstrated problem-solving demands being typically associated with psychological strain, while monitoring and time demands were more associated with turnover intent and job satisfaction. These outcomes suggest that workers use both problem-focused and emotion-focused coping depending on the stressors and their perceived ability to change the stressor. Workers also appraise stressors with either positive or negative valence based on each individual's previous experiences (Beehr, 2001). Such interaction is a hallmark of the DPM in that oscillation between loss-oriented and restoration-oriented coping occurs as workers vary their coping mechanism in response to specific job stressors. Adapting the DPM for work stress may accurately describe the stressors experienced by hospice workers on an ongoing basis, as the DPM defines the use of problem-focused and emotion-focused coping with multiple stressors instead of individual stressors.

## Coping Strategies for Hospice Workers

Functional coping skills are essential to keep hospice workers from experiencing stress, compassion fatigue and burnout in their professional work. Shinn, Rosario, Mørch, and Chestnut (1984) define coping as actively working to decrease strain or stress, and theorize coping occurs on three levels: (a) social support; (b) strategies provided by the employer; and (c) individual strategies. Awa et al. (2010) described coping strategies not as levels, but as types, also indicating three types: (a) person-directed such as cognitive-behavior strategies, relaxation, coping skills, or social support); (b) organization-directed including changes to workload, job tasks or supervision; or (c) a combination of person- and organization-directed strategies. The progression of burnout begins with emotional

exhaustion, which develops into depersonalization, and ultimately impacts personal accomplishment. Interventions focusing on minimizing emotional exhaustion could help to break or slowdown the development of burnout (Cordes & Dougherty, 1993).

A review of burnout intervention programs was conducted by Awa et al. (2010), and found most intervention periods last fewer than six months, with burnout reduced in 84% of the studies. Reduced levels of burnout could be maintained for 6-12 months post-intervention, with levels of emotional exhaustion being impacted the most. Positive changes in depersonalization scores and reduced personal accomplishment did not last as long as reductions in emotional exhaustion. Findings also indicated that interventions provided by the employer, or as a combination of those being provided by the employer and interventions designed specifically for individuals, lasted longer than interventions targeted to the individual alone. A further distinction for stress and burnout interventions were discussed by Ahola et al. (2007) stating that burnout interventions vary to address recognition/prevention or treatment/rehabilitation. Prevention intervention addresses job changes, while treatment provides interventions for the individual (Maslach & Goldberg, 1998).

Interventions grouped by methodology include primary, secondary, and tertiary approaches. Cooper and Cartwright (1997) identified three prevention approaches (i.e., primary, secondary, and tertiary) for reducing job stress and burnout. Primary prevention approaches change or extinguish the stress in order to reduce negative outcomes for the individual in the work environment. Examples of primary prevention include education, agency resources, improved communication with supervisors, and increased job control.

Secondary prevention relates to identifying sources of stress and working on stress management in order to diminish negative outcomes. Secondary prevention interventions work on increasing stress management skills through education and training to provide adaptive coping mechanisms. Lastly, tertiary prevention addresses "treatment, rehabilitation and recovery" (Riahi, 2011, p. 727) for individuals with significant stress related issues or burnout, in order to recover coping mechanisms to improve overall health and manage job related stress. Counseling is considered a tertiary preventive approach. Social support, empowerment through employer-directed interventions, and person-directed interventions are important coping strategies that can help effectively manage stress and burnout.

**Social support.** Social support in the workplace has been cited as a protective factor against job stress and burnout. Social support at work includes support received from the organization and co-workers (Park, Wilson, & Lee, 2004). High levels of social support resulted in low stress and low burnout for nurses (Hillhouse & Adler, 1997), and have also been found to increase individuals' mental health and productivity at work (Park et al., 2004). Shinn et al. (1984) surveyed 141 human service workers regarding coping strategies and burnout, and found that job stress was related to high levels of worker strain, though individuals who had social support had low levels of job strain. Women used social support more frequently than men, though researchers were uncertain if social support was initiated or received by respondents. A later study by Whitebird, Asche, Thompson, Rossom, and Heinrich (2013) surveyed 547 hospice workers in Minnesota to determine worker's levels of stress, burnout, compassion fatigue, and

mental health. Results indicated that most staff had good mental health, though stress scores were in the moderate to very high category for a majority of the staff surveyed. There was also a small group of staff who reported moderate to severe symptoms for depression, anxiety, compassion fatigue, and burnout. To combat stress, staff reported engaging in physical activity and social support, with social support perceived as a key protective factor in managing stress to decrease burnout potential. Hospice workers risk for burnout is greater than for other professionals due to the specific stressors, such as working in a highly emotional environment and recurrent loss experienced at work.

**Strategies provided by the employer.** Employers can also provide stress management training and resources to employees to encourage adaptive coping to manage work stress. In addition to social support, empowerment is another protective factor against job stress and burnout. Empowerment at work can be achieved through job opportunities, organizational support, or control, which increases individuals' psychological empowerment (i.e. meaning, confidence, autonomy) (Jennings, 2008; Laschinger, Finegan, Shaimian, & Wilk, 2001; Laschinger, Finegan, & Shaimian, 2001; Laschinger, Finegan, Shaimian, & Almost, 2001). As individuals feel more empowered, they experience decreased levels of emotional exhaustion and depersonalization, and increased personal accomplishment. The outcomes of Laschinger's work indicate that empowerment is a necessary protective factor against job stress and burnout, as empowerment can alter all three components (exhaustion, depersonalization, and reduced personal accomplishment) of burnout (Hatcher & Laschinger, 1996). Additional results from the 1984 survey of 141 human service workers by Shinn et al. (1984) indicated that

respondents had specified to management ways employers could decrease work stress (e.g., decreased workloads, improved communication, increased job control), but there was minimal implementation in the work environment. Agency provided support was the least used coping strategy, with many indicating that their employer offered educational support, but not opportunities to learn or practice active coping strategies.

**Individual strategies.** Individual strategies have been the most common type of interventions workers engage in to manage work stress, and could include pharmacological and non-pharmacological interventions. Shinn et al. (1984) surveyed 141 human service workers regarding coping strategies and burnout. Staff indicated using individual strategies a majority of the time with most people (64%) coping through family involvement or hobbies. Other strategies included vacation time (31%), increasing job competence (30%), cognitive/emotional strategies related to stressors (30%), and 22% indicating a need to change jobs. Examination of existing coping strategies indicates respondents primarily used distraction to cope with job stress, instead of active coping techniques to learn how to manage their response to the stressors.

A systematic review of job stress and coping literature found 68% of the studies used person-directed interventions in their study design (Awa et al., 2010). Individual or person-directed strategies addressed communication, counseling, adaptive skills, relaxation techniques, and active music making. Employees with burnout were more likely to engage in person-directed interventions instead of organization-directed interventions than those who are not burned out. Ahola et al. (2007) surveyed 3276 Finnish employees and found that the use of antidepressants as a coping mechanism was

2.53 times more common for individuals with severe burnout, compared to those who were not burned out. An earlier study by Payne (2000) surveyed female nurses and nursing assistants working in hospice and identified both stressors and coping mechanisms based on Folkman and Lazarus' (1986) Ways of Coping (revised). Results of the study indicated that staff used "planful problem-solving, social support, self-control, acceptance of responsibilities, positive reappraisal, distancing, confrontation, and escape" (p. 401). Planful problem-solving involved four steps: (a) identifying the problem, setting potential goals, and recognizing potential complications; (b) thinking about ways to overcome complications; (c) considering the risk in approaching the problem differently, and making a plan; and (d) following through with the plan and assessing if the outcome was successful (Nezu, Nezu, & D'Zurilla, 2013).

The coping mechanisms used in Folkman and Lazarus' Ways of Coping (revised) and the results of Payne (2000) can be related back to the Dual Process Model of Coping with Bereavement (DPM) and the use of loss-oriented (LO) and restoration-oriented coping (RO). LO coping includes rumination and focuses on life before the loss, while RO coping relates to secondary sources of stress associated with the loss and attends to role changes. Oscillation is the process of moving between LO and RO coping. Escape and distancing could be viewed as LO, while planful-problem solving, social support, acceptance of responsibilities, positive reappraisal and confrontation could be seen as RO coping skills. Self-control does not necessarily relate back to LO or RO coping, but could be viewed as part of the oscillation process, requiring self-control to navigate between the use of LO and RO based on the stressor.

The previous sections have detailed the models and theories of work stress (Demand-Control Theory, Conservation of Resources Theory, Person-Environment Fit Model, Effort-Reward Imbalance Model of Job Strain, and Job Demands-Resources Model). Additionally, the Dual Process Model of Coping with Bereavement was described, applying the model to bereavement experienced by hospice workers. Lastly, coping strategies for hospice workers including social support, strategies provided by the employer, and individual strategies were introduced. The researcher summarizes this literature and extracts the protective and risk factors inherent in the development of stress and burnout as related to hospice (See Table 1) and connects the results of the current study to this table in the discussion section of this paper.

Table 1

*Summary of Review of Literature for Hospice Worker's Protective and Risk Factors for Development of Stress and Burnout*

| Protective Factors | Risk Factors |
|---|---|
| • Social support | • Maladaptive coping skills |
| • Physical exercise | • Overcommitment |
| • Religion/Faith | • Inability to disengage from work |
| • Family involvement | • Compassion fatigue |
| • Vacation time | • Emotional exhaustion |
| • Planful problem-solving | • Depersonalization |
| • Acceptance of responsibilities | • Reduced personal accomplishment |
| • Positive reappraisal | • Boredom |
| • Empowerment | • Anxiety |
| • Compassion satisfaction | • Job demands |
| • Job control | • Psychological strain |
| • Job rewards | • Role ambiguity |
| • Job resources | • Role conflict |
| | • Workload |
| | • Lack of resources/training for job |
| | • Complicated grieving |

## Mindfulness

Mindfulness is an individual or person-directed intervention that has grown in acceptance and use over the years. Mindfulness practice is derived from Buddhism, and was first introduced into the medical setting in 1979. Mindfulness is the intentional focus on being in the moment, and allowing the mind to be open to the experience without judgment. Kabat-Zinn developed the first mindfulness-based stress reduction program

(MBSR) at the University of Massachusetts for individuals with chronic illness (Moyers, 1993). Since 1979, the use of mindfulness has increased, and is now used by both healthy and unhealthy people to address a variety of needs (Moyers, 1993). A systematic review of MBSR programs indicated a range in program training from 8-32 hours, with some programs also requiring practice at home (Sharma & Rush, 2014). Results supported that MBSR is effective in helping individuals manage stress, though most research participants were female, so generalization to the general public is difficult with limited male representation. The primary outcome of this study was the recognition that a shorter version of the MBSR protocol is needed due to the vast range in hours required across programs. Prior to the Sharma and Rush (2014) systematic review, Carmody and Baer (2009) studied MBSR programs to better determine the appropriate length of intervention. In their program review they found MBSR programs ranged from 4-10 sessions, with an average of eight sessions. Additionally, total session time ranged from 6-28 hours, and 13 studies included an all-day retreat to integrate concepts that ranged from 3-8 hours. Analysis of outcomes revealed no significant difference between mean effect size and the number of class hours, indicating that the number of class hours could be reduced to decrease the overall time commitment while participants could still benefit from the positive outcomes of a MBSR program. Shorter programs could also increase the number of people interested in engaging in MBSR programs (Carmody & Baer, 2009). While outcomes demonstrated a reduction in hours was possible, no exact recommendation for hours was presented.

A reduction in the hours involved with MBSR interventions could increase acceptance and accessibility. As a possible model for a shorter time frame, Gauthier, Meyer, Grefe, and Gold (2014) used a 5-minute version of Kabat-Zinn's MBSR protocol, delivered through CD during shift change for pediatric intensive care unit nurses over 30 days. Results indicated the brief MBSR intervention was helpful as participants had a significant decrease in stress pre to post-intervention, and also reported increased relaxation and life satisfaction. The score for the three components of burnout (i.e., emotional exhaustion, depersonalization, and personal accomplishment) were all initially high. Personal accomplishment scores increased at time two and decreased at time three, with no significant impact for emotional exhaustion and depersonalization. Though not significant, participants also experienced increased job satisfaction from pre- to post-intervention period. Results of this study indicate that the intervention more effectively impacts personal accomplishment with more than one exposure.

Researchers also compared mindfulness protocols to other intervention types and mindfulness presented in different formats. Wolever et al. (2012) conducted a pilot study to examine intervention effectiveness between Viniyoga stress reduction program and two mindfulness-based interventions (one delivered in person and the other delivered online) for job stress. The Viniyoga intervention consisted of one-hour classes over 12 weeks, while the mindfulness intervention included one-hour classes over 12 weeks, and also a two-hour intensive mindfulness practice during week 10, offered as in-person or online formats. All three interventions (mindfulness and Viniyoga) resulted in decreased levels of perceived stress. Additionally, mood and work productivity improved pre- to

post-intervention, though the change was not statistically significant. The delivery method for the mindfulness-based intervention (live vs. online) yielded similar results for both formats. A later study by Ly et al. (2014), examined intervention effectiveness comparing behavioral activation and mindfulness self-help, delivered through a smartphone application for individuals with major depressive disorders. No significant differences in depression scores were seen between groups pre- to post-test. Results also indicated that mindfulness was significantly better than behavioral activation for individuals with lower depression scores, while behavioral activation was more effective for individuals with higher depression scores. Mindfulness-based interventions effectively help individuals manage stress, increase mindfulness and job satisfaction, though there are varying opinions regarding program length.

**Online mindfulness-based interventions.** In order to increase accessibility, mindfulness protocols and programs have been made available online. Morledge et al. (2013) conducted a 12-week randomized, parallel, controlled trial to determine the feasibility of offering a mindfulness-based program online. Participants used the internet to access the webpage with mindfulness concepts, a 5-10 minute audio introduction, and a link to download a 20-25 minute guided meditation to practice mindfulness at least five times per week. Participants were randomly assigned to either the Internet-based Stress Management program (ISM) or ISM with use of an online message board (ISM+). The online message board provided discussion prompts to increase participant interest and generate group discussion. Results indicated that both groups had significant decreases in stress, and the impact of the intervention delivered online was similar to the outcomes

seen in traditional mindfulness programs delivered in person. The outcomes of this study indicate that an ISM program can increase an individual's ability to access resources, manage stress, and could be cost-effective for underserved populations that do not have other available resources (Morledge et al., 2013). Similarly, Cavanagh et al. (2013) conducted a randomized, wait-list control trial for a 10-minute mindfulness-based intervention to determine intervention effectiveness for mindfulness, perceived stress, anxiety, and depression. Participants were given unlimited access to an online intervention over a 2-week period. Results showed a significant decrease in perceived stress, anxiety and depression for those in the mindfulness intervention, with participants using the intervention more frequently as the study progressed. The drawback of the intervention being provided online rather than in person was seen through a high attrition rate. Online interventions increase access to services with similar effects, though research studies utilizing online interventions typically have higher attrition rates.

## Relationship Between Health and the Arts

The arts provide positive outlets to manage stress, anxiety, and depression. Davies, Knuiman, Wright, and Rosenberg (2014) conducted a qualitative study using semi-structured interviews to examine the association between health and engagement in the arts. Respondents reported engagement in the arts (i.e., visual, theatrical, musical) either actively or passively, resulting in increased relaxation and reduced stress, anxiety and depression. A thematic analysis identified 17 codes within seven overall themes, and grouped as either: (a) health such as "physical, mental, or social factors" or (b) health determinants such as "art, economic, knowledge, & identity factors" (Davies et al., 2014,

p.7). Additionally, improved mental health outcomes were mentioned seven times more often than social health outcomes, and five times more than other outcomes. Participants also felt that the arts provided opportunities for learning and skill development, and could possibly promote health and healing. Specifically within the arts, music is an effective modality to manage work-related stress.

**Music-based interventions**

Music therapy approaches paired with other treatment modalities can be effective to manage work stress. Cheek, Bradley, Parr, and Lan (2003) studied the use of music therapy techniques in addition to cognitive/behavioral therapy on teacher burnout. Participants were randomly assigned to either a cognitive/behavioral therapy group (CB), or a cognitive/behavioral therapy group that incorporated music therapy techniques (CB/MT). Specific music therapy techniques used were not clearly delineated, though broad descriptions can be interpreted as the use of lyric analysis and use of participant selected music to cognitively process emotional responses. Outcomes indicated participants in the CB/MT group experienced a statistically significant decrease in depersonalization as compared to the CB group, indicating one element of burnout was impacted through the use of music therapy techniques. Participants also report that engaging in the CB/MT group gave them an opportunity to learn coping strategies that could be implemented outside of the group.

Music interventions specifically designed for stress reduction can help individuals effectively manage stress, and can be accessible through personal recordings or online interventions. Pelletier (2004) conducted a meta-analysis on the use of music to decrease

stress arousal, looking at 22 quantitative studies. Analysis of the research indicated that music and music-assisted relaxation techniques significantly decreased arousal, though the significance varied depending on "age, type of stress, music-assisted relaxation technique, music preference, previous music experience, and type of intervention" (Pelletier, 2004). Furthermore, outcomes indicated that researcher selected music was more effective in reducing stress than music selected by participants. Burns et al. (2002) had participants rate their anxiety and relaxation levels after listening to music excerpts or silence. Results indicated participants in the music condition experienced significant decreases in anxiety and heart rate pre- to post-intervention, suggesting that music is an effective intervention for stress management.

Lai and Li (2011) examined the impact of music on biochemical markers and perceived stress for nurses. Participants in a cross-over plot study were randomly assigned to either self-selected relaxing music (from six presented options) or chair rest condition for 30 minutes. Results indicated statistically significant differences in participant's levels of perceived stress pre- to post-intervention. Additionally, participants in the music condition experienced lower levels of perceived stress and had decreased cortisol, heart rate, mean arterial pressure, and warmer finger temperature while listening to music than compared to those resting in a chair.

Music-based intervention can include, but is not limited to the following, active engagement through songwriting, lyric analysis, instrument play, or music listening. Based upon the intent to decrease worker stress with a readily accessible intervention,

music listening for the purpose of decreasing stress and subsequent burnout was chosen for the current study.

**Effective music elements for stress management.** The use of specific musical elements must be intentional for music to be an effective intervention for stress management. Lichstein (1988) concluded that music for the intended purpose of relaxation needs to be "portable, relatively brief, convenient, and unobtrusive (p. 265)." Elliott et al. (2011) studied musical elements to determine which were most beneficial or distracting for relaxation music. Participants listened to 30 musical excerpts, and rated the importance of the element for the intent of relaxation. Tempo was rated to be the most influential music component, and should be set between 80-100 beats per minute (bpm). This outcome supports previous research by Karageroghis and Terry (1997), and Holbrook and Anand (1990). Participants also rated rhythm as a key component, indicating rhythms should be simple and repetitive. The beat is most effective with a regular pulse in 4/4 time, the complexity should be limited to only a few instruments (primarily piano and strings) with minimal dynamic and key changes. Lastly, familiarity of the music was not rated with high importance, which supports research by Wolfe et al. (2002). The characteristics of the music were defined as having no sudden changes in rhythm or volume, with tempo marking ranging from 60-80 bpm, and piano was the most frequently chosen instrumentation. These findings are consistent with Fiore's (2014c) Therapeutic Function of Music (TFM) (Hanson-Abromeit, 2015) analysis which identified the necessary musical elements for music to support a relaxation response.

Stress and burnout is a potential problem for hospice workers due to the high level of emotion and personal care provided on a daily basis. Development and maintenance of coping skills is necessary to manage personal and environmental stressors. Coping strategies can be individually based, agency based, or consist of a blend between personal and agency. Due to the autonomous work environment in hospice, online interventions could be useful to provide hospice workers with strategies that could be implemented on any type of mobile device during the work day. Music-based or mindfulness-based interventions that are time limited would provide hospice workers with a fast and effective way to manage stress when needed, and overtime could decrease burnout.

**Purpose Statement**

The purpose of this study was to compare the effect of an online music-based intervention with an online mindfulness-based intervention to decrease hospice workers stress and subsequent professional quality of life. This study sought to answer the following questions.

Was an online music-based relaxation intervention more effective than an online mindfulness based intervention for decreasing hospice workers' stress and improving workers' professional quality of life?

Was a particular musical element perceived as more beneficial in decreasing worker's stress and improving professional quality of life?

Did participants perceive the use of an online intervention beneficial?

Would participants continue to use an online intervention whether or not it was supported by the agency?

What factors affected implementation of the intervention, and how could implementation vary in the future?

What intervention(s) [Music, Meditation, Both, Neither] would participants be more likely to use in the future?

# CHAPTER III

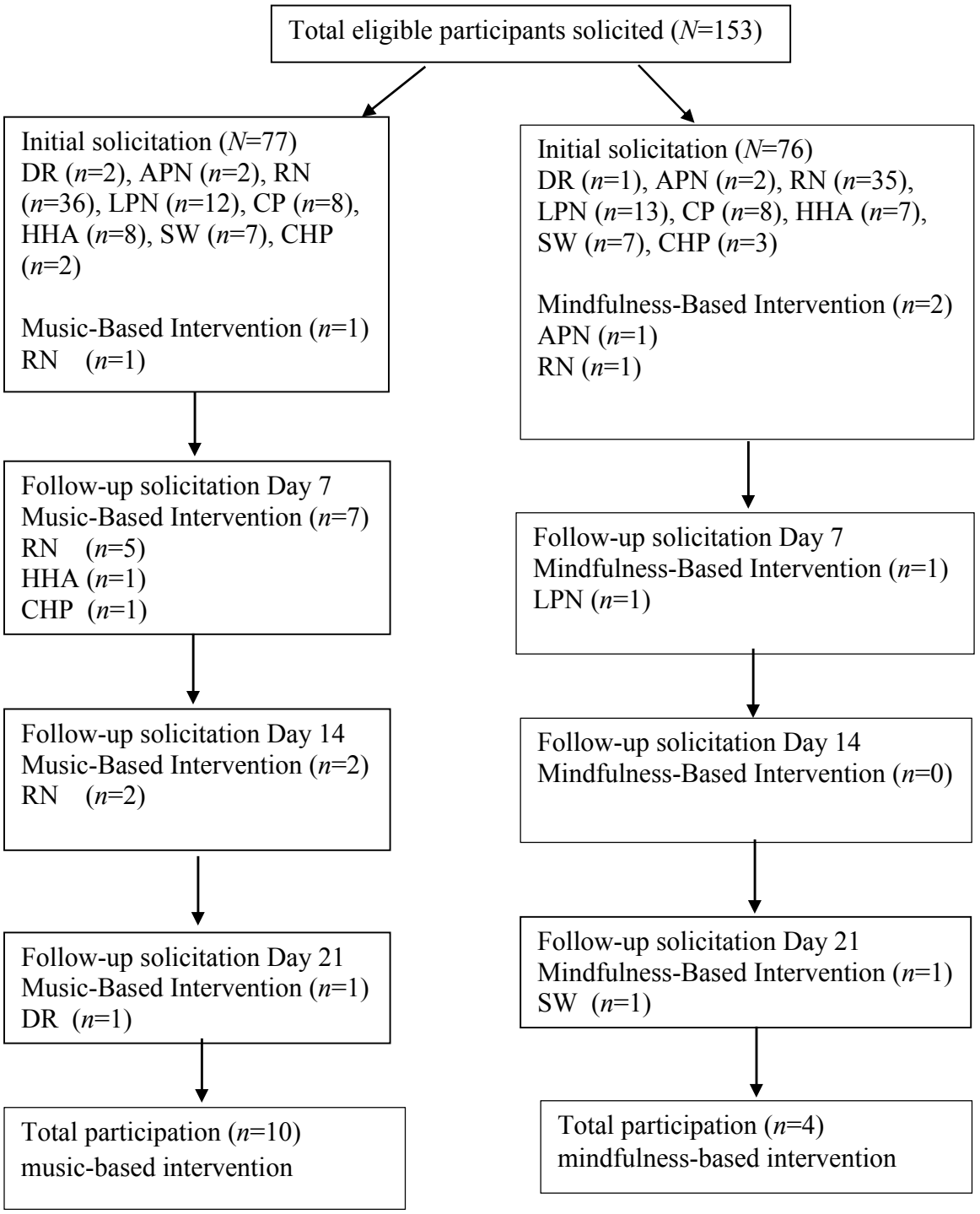
# METHOD

## Recruitment

The researcher obtained human subjects committee approval through a large Midwestern university to conduct this study. In addition, as part of the human subjects review process, a letter of agreement was obtained from the hospice from which hospice workers were recruited. The hospice where the researcher was employed as one of two board certified music therapists gave approval for the study to be conducted with their staff. A list of all hospice house and hospice field staff email addresses was obtained from the Facilities and Operations Manager. The list was sorted by discipline, and each discipline list was then entered into the Research Randomizer website (www.randomizer.org/form.htm) to randomize treatment groups and to account for equal representation of each discipline within treatment groups. Email addresses were entered into an email distribution list, creating a separate list for each treatment condition. All staff eligible to participate (*N*=153) in the study were sent an email by the researcher that included a description of the study, an information statement (see Appendix A), and a link to the study with the corresponding randomized intervention. Participant consent was assumed by accessing the study link. Follow-up emails for participation in the study were sent to potential participants through the use of the treatment condition distribution lists every seven working days by the researcher during the four-week data collection period (See Figure 1).

Figure 1

*Consent to Participate Flow Diagram*



**Participants**

A convenience sample was used for this study, as the researcher was employed at the hospice agency as a board-certified music therapist. Participation was open to all hospice house and hospice field staff of a large non-profit hospice agency (over 250 employees), in a large Midwestern metropolitan area. Participants were recruited from professional disciplines employed at this hospice and include: Physicians (DR), Advanced Practice Nurse (APN), Registered Nurses (RN), Licensed Practical Nurses (LPN), Home-health Aides (HHA), Care Partners (CP), Social Workers (SW), and Chaplains (CHP). The agency music therapist and music therapy intern were excluded from the study due to awareness of the study design. The total number of participants in this study was ($N$=14), including women ($n$=13) and men ($n$=1). The number of participants according to discipline was Physicians ($n$=1), Advanced Practice Nurse ($n$=1), Registered Nurses ($n$=8), Licensed Practical Nurses ($n$=1), Home-health Aides ($n$=1), Care Partners ($n$=0), Social Workers ($n$=1), and Chaplains ($n$=1). Participants ranged in age from 27 to 66 years, with an average age of 45.85 years. Years in participant's discipline ranged 1 to 46 years, with an average of 16.82 years in the discipline. Additionally, the number of years participants have worked in hospice ranged from 6 months to 17 years, with an average of 5.67 years. Relating to the burnout literature, 71% of participants have worked in hospice less than 10 years, while 29% have worked in hospice longer than 10 years (Yoder, 2010).

Participants were randomly assigned to either a music-based intervention group or a mindfulness-based intervention group, with equal representation of each discipline

between groups prior to solicitation for participation. The music-based intervention group consisted of Physicians (*n*=1), Advance Practice Nurses (*n*=0), Registered Nurses (*n*=7), Licensed Practical Nurses (*n*=0), Home-Health Aides (*n*=1), Care Partners (*n*=0), Social Workers (*n*=0), and Chaplains (*n*=1). The mindfulness-based intervention group consisted of Physicians (*n*=0), Advance Practice Nurses (*n*=1), Registered Nurses (*n*=1), Licensed Practical Nurses (*n*=1), Home-Health Aides (*n*=0), Care Partners (*n*=0), Social Workers (*n*=1), and Chaplains (*n*=0).

**Procedure**

This study was conducted during the first quarter of 2015, a time of year with a typically higher patient census at the hospice involved in the current research study. The demographic survey, outcome measures for pre- and posttest stress and burnout, accompanying music-based intervention or mindfulness-based intervention, and post-intervention feedback were hosted on the JotForm© website (www.jotform.com). JotForm is an online form building site that allows sound and video files to be embedded into forms which can be sent out to respondents. Each intervention (music-based or mindfulness-based) were hosted on a separate JotForm site. JotForm has varying product levels ranging from starter to professional grade. The researcher used the starter level available at no cost, which allows 100 submissions per month. All components of the study were available through JotForm so staff could participate in the study at any point during their shift, and in their chosen environment.

**Demographic survey.** Each participant created his/her own unique ID number to maintain confidentiality as part of the online survey. The subsequent survey consisted of demographic questions, such as age, gender, professional discipline, length of time in profession, length of time working in hospice, primary work setting (hospice house or field staff), number of hours worked during current shift at time of participation, number of hours worked per week, number of hours worked concurrently at jobs other than hospice, number of times healthcare was accessed for self over the last month and number of work hours missed in last month due to participant illness, perceived level of control in his/her job, perceived level of stress, identification of current stressors, perceived level of burnout, and current coping methods.

**Outcome measures.** After finishing the demographic survey, participants completed the Stress Overload Scale (SOS) (Amirkhan, 2012) and the Professional Quality of Life Scale (ProQOL) (Stamm, 2005) before listening to either a recording as part of a music-based intervention or a script as part of a mindfulness-based intervention. The SOS contains 30 questions, with 12 relating to personal vulnerability (i.e., ability to cope) and an additional 12 targeting event load (i.e., extent of responsibilities), and six serving as fillers. SOS questions (i.e., i*n the past week, have you felt overextended*) use a five-point scale with the anchors of "not at all" and "a lot."

The SOS was developed for use across multiple settings and populations, and can either be scored continuously or by subscale. Continuous scores range from 24 (low stress) to 120 (high stress). Subscale scores measure personal vulnerability (PV) and event load (EL), with scores for each scale ranging from 12 to 60. Subscale scores can

then categorized as *Low Stress/Lowest Risk* (PV=12-30 and EL=12-40); *Challenged/Low Risk* (PV=12-30 and EL= 41-60); *Fragile/Low Risk* (PV=31-60 and EL=12-40); or *High Stress/High Risk* (PV=31-60 and EL= 41-60). The mean value for the SOS subscale is 28 for personal vulnerability, and 38 for event load. The SOS was determined to be psychometrically sound, especially for validity of popular measures, and functional in community research due to the number of items, its fit with a broad demographic population, and its ability to identify individual risk categories. Internal consistency for the continuous SOS was .96, with the PV and EL subcales both at .94 (Amirkhan, 2012). Validity for the continuous SOS was $r$=.17, $p < .01$, with PV resulting in $r$=.10, n.s., and EV scoring $r$=.16, $p < .01$.

The ProQOL was developed for professionals in helping work, and consists of 30 statements of how participants have felt over the last 30 days relating to their professional quality of life, including compassion satisfaction, secondary traumatic stress/compassion fatigue, and burnout. A sample statement would be *I find it difficult to separate my personal life from my life as a helper...*, with response options including never, rarely, sometimes, often, and very often. ProQOL statements are weighted on a scale of one to five, with five items being scored in reverse. The items are summed by subscale (compassion satisfaction, secondary traumatic stress or compassion fatigue, and burnout), and then the raw score is converted into a *t*-score. The mean score for compassion satisfaction is 50 ($SD$=10, $\alpha$=.88), with scores above 57 indicating a high level of compassion satisfaction, and scores below 40 signifying possible problems with the participant's job. The mean score for secondary traumatic stress or compassion fatigue is

50 (*SD*=10, $\alpha$=.81), with a score over 57 indicating a need to reflect on what aspect of work is perceived as traumatic or stressful. The mean score for burnout is 50 (*SD*=10, $\alpha$=.75), with scores above 57 indicating participants do not feel effective at work, and scores below 18 showing that participants feel positive about their work effectiveness.

**Music-based Intervention**

The music-based relaxation intervention included participants listening to an original piece of music written by the researcher, based upon an analysis of the Therapeutic Function of Music (TFM) (Hanson-Abromeit, 2015) for stress and anxiety management (Fiore, 2014c). The analysis of the TFM led to the following considerations:

> Fiore (2014c) concluded that the intervention should begin with a series of strong pulses on beat one (Huron, 2006), set at 72 bpm (Robb et., al, 1995) to establish entrainment (Yehuda, 2011; Schneck, 2005). The instrumentation includes a blend of piano, flute, and strings (Yehuda, 2011; Robb et. al, 1995); initially playing four measure phrases (Huron, 2006), expanding to eight measure phrases to allow further development of the music and sustained attention. The form of the music is ABA is also supported I the phrasing and through the use of the key signature; beginning in C major (Suda, Morimoto, Obata, Koizumi, & Maki, 2008), modulating to A minor, and then returning to C major. The melody should contain step-wise motion (Yehuda, 2011) with occasional small interval leaps. The range of the melody should be kept between G4-C6 (Huron, 2006). Chromatic tones will be used when approaching final cadences to increase predictability (Huron, 2006). Chording will primarily be done with root position chords (Huron, 2006) to increase familiarity, with chord inversions being used at times for novelty to sustain attention. Changes in dynamics should be limited and gradual to decrease the stress response (Robb, et al., 1995). The complexity of the instrumentation and rhythmic structure will be decreased over the duration of the intervention, resulting in a single timbre.

The researcher, a board-certified music therapist with a master's degree and over 10 years of clinical experience in hospice music therapy, wrote the musical composition.

"Music for Trio" (Fiore, 2014b) a five-minute piece consisting of 88 measures in an ABA format, with alto flute, piano, and guitar instrumentation (See Appendix A). The three musicians who played for the recording each had over 17 years of experience on their respective instruments. The alto flute was re-recorded after initial use in a pilot study based upon participant feedback indicating vibrato was not effective, and some intonation issues (Fiore, 2014b). Both the initial and subsequent recordings were created at the same studio and mixed professionally. Once mixed, the studio engineer altered the tempo markings as indicated by the researcher that were purposefully related to transitional points in the musical form. The tempo started at 72 bpm in measures 1-24, then changed to 71 bpm for measures 25-40, 70 bpm for measures 41-48, 69 bpm for measures 49-60, and 68 bpm for measures 61-88. The altered recording was uploaded to SoundCloud (https://soundcloud.com/user604701773), and a link to the recording was embedded in the JotForm (www.jotform.com) survey by the website's technical support. An additional link was provided in the text of the survey in case the embedded link for the music did not function correctly.

**Mindfulness-based Intervention**

The mindfulness-based intervention used in the current study consisted of a five and half minute long breathing meditation protocol, which is one component of mindfulness. The breathing meditation was recorded by Diana Winston, Director of Mindfulness Education at UCLA, and the UCLA Mindful Awareness Research Center (MARC). Diana Winston is a longtime meditation teacher and has published books on mindfulness. The mp3 recording was available free of charge, online

(http://marc.ucla.edu/mpeg/01_Breathing_Meditation.mp3) or as a free download through the iTunes store (https://itunes.apple.com/itunes-u/mindful-meditations/id434136047?mt=10#ls=1) (See Appendix B for a transcription). The mindfulness intervention was five and a half minutes long, was spoken by a female, and focused on the body from the inside, the breath within the body, and a continued focus on breathing throughout the intervention. The recording of the free download was uploaded to SoundCloud (https://soundcloud.com/user604701773) and properly cited. A link to the recording was embedded in the JotForm (www.jotform.com) survey by the website's technical support. An additional link was provided in the text of the survey in case the embedded link for the breathing meditation did not function correctly.

**Post-intervention Feedback Process**

After listening, participants completed the post-test measures of the SOS and the ProQOL. Next, participants in the music condition indicated through checklist and "other" narrative response what specific elements of music (melody, harmony, rhythm, tempo, instrumentation, key, or"other") they felt were most and least effective elements in the music. Participants in both conditions then indicated what they did while listening to either the music or mindfulness interventions from a list of options (e.g., closed eyes, meditated, pictured images in mind, practiced deep breathing, or "other" where they could write in their own response), where they were during the intervention (e.g., desk, car, office, outside) and how they listened (speakers or with use of headphones/earbuds). Participants were be presented feasibility questions related to the interventions to determine the participant's perception of intervention use, the practicality and integration

of the intervention into the workday, and what factors affected implementation of the intervention. The total time involved ranged from 15-20 minutes.

# CHAPTER IV

## RESULTS

A total of 153 eligible hospice workers were solicited for participation in the current study (See Figure 1). These 153 individuals were randomly assigned to either music-based or mindfulness-based intervention. The total number of participants completing this study was ($N$=14), including women ($n$=13) and men ($n$=1). The number of participants according to discipline was Physicians ($n$=1), Advanced Practice Nurse ($n$=1), Registered Nurses ($n$=8), Licensed Practical Nurses ($n$=1), Home-health Aides ($n$=1), Care Partners ($n$=0), Social Workers ($n$=1), and Chaplains ($n$=1). Ten participants assigned to the music-based intervention and four participants assigned to the mindfulness-based intervention completed the study. This chapter is based on the research questions posed for the study.

*Was an online music-based relaxation intervention more effective than an online mindfulness based intervention for decreasing hospice workers' stress and improving workers' professional quality of life?*

An a priori power analysis for a repeated measures ANOVA, within-between interaction ($f$=.4, $\alpha$=.05) for two groups and two measurements indicated the need for a total sample size of 24 participants for adequate power (Faul, Erdfelder, Buchner, & Lang, 2009). Statistical analysis is not recommended for studies with small samples (Arain, Campbell, Cooper, & Lancaster, 2010). Therefore, due to the overall limited participation and unbalanced treatment groups, it was not appropriate for the researcher

to conduct statistical analysis beyond looking at the means and standard deviations of the measures for the purpose of understanding clinical significance.

**Stress Overload Scale (SOS)**

The SOS can be scored either continuously, or through the use of two separate subscales, personal vulnerability (PV) and event load (EL), with the intention for scores to decrease post-intervention. Continuous scores range from 24 (low stress) to 120 (high stress). Subscale scores for PV and EL range from 12 to 60. Subscale scores can then be categorized as *Low Stress/Lowest Risk* (PV=12-30 and EL=12-40); *Challenged/Low Risk* (PV=12-30 and EL= 41-60); *Fragile/Low Risk* (PV=31-60 and EL=12-40); or *High Stress/High Risk* (PV=31-60 and EL= 41-60). The normative mean value for the SOS subscale is 28 for personal vulnerability, and 38 for event load.

Participant ratings for the SOS, and the two SOS subscales (personal vulnerability and event load) were transferred from the JotForm (http://www.jotform.com) output Excel file, and were hand coded on their respective score sheets. Calculated scores for pre and post SOS, and the two SOS subscales were then added to the Excel file, and loaded into SPSS for data analysis.

In order to examine the possible effect of a music-based intervention on hospice workers' stress levels, the researcher compared pre- and post-intervention means. Further statistical analysis was not performed due to the small sample size and unbalanced participant groups. The SOS continuous scores pre-intervention ($M$= 74.90, $SD$=19.83) to post-intervention ($M$=74.70, $SD$=20.87) remained essentially the same with a slight decrease following the use of the music-based intervention. When looking at the

subscales of the SOS, the score for personal vulnerability (PV) pre-intervention (*M*=, 31.60, *SD*=9.95) compared to post-intervention (*M*= 31.10, *SD*=10.37) remained essentially the same with a slight decrease in worker's vulnerability, with the score for event load (EL) pre-intervention (*M*= 43.30, *SD*=10.39) to post-intervention (*M*= 43.60, *SD*=11.12) also remaining essentially the same but with a slight increase in mean event load (See Table 2) following the use of the music-based intervention.

A comparison of means and standard deviations pre- and post-intervention was also conducted for the mindfulness-based intervention group SOS scores. The SOS continuous scores pre-intervention (*M*= 70.25, *SD*=25.05) to post-intervention (*M*=73.00, *SD*=25.22) resulted in an increase in continuous stress overload scores, and indication of an increase in means indicates an increase in stress. When looking at the subscales of the SOS, the score for PV pre-intervention (*M*=29.75, *SD*=10.01) compared to post-intervention (*M*=29.50, *SD*=9.04) showed a trace reduction in worker's vulnerability, while the score for EL pre-intervention (*M*=43.00, *SD*=14.88) to post-intervention (*M*= 43.50, *SD*=16.30) showed a slight increase in worker's event load (See Table 2) following the use of a mindfulness-based intervention.

Table 2

*SOS Continuous, Personal Vulnerability, and Event Load Means and Standard Deviations*

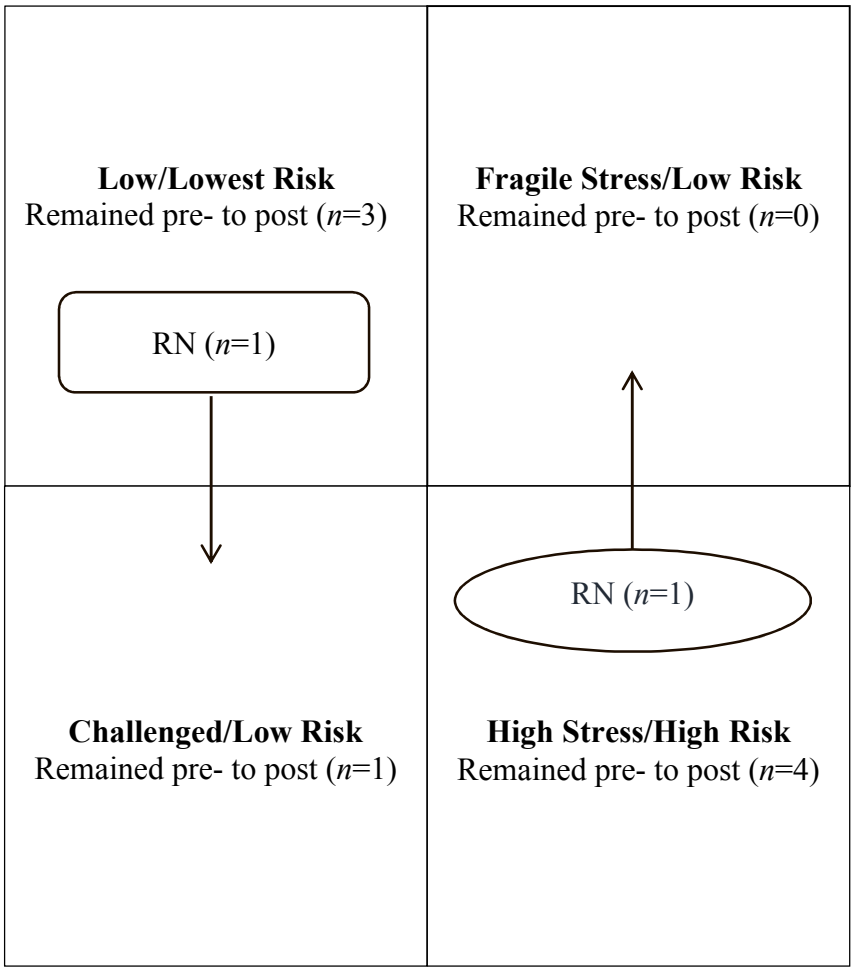
| Condition | SOS Continuous (Pre) | SOS Continuous (Post) | SOS PV (Pre) | SOS PV (Post) | SOS EL (Pre) | SOS EL (Post) |
|---|---|---|---|---|---|---|
| Music | | | | | | |
| Mean | 74.90 | 74.70 | 31.60 | 31.10 | 43.30 | 43.60 |
| *SD* | 19.83 | 20.87 | 9.95 | 10.37 | 10.39 | 11.12 |
| | | | | | | |
| Mindfulness | | | | | | |
| Mean | 70.25 | 73.00 | 29.75 | 29.50 | 43.00 | 43.50 |
| *SD* | 25.05 | 25.22 | 10.01 | 9.04 | 14.88 | 16.30 |

Movement within the SOS categories was also examined (See Figures 2 and 3). Overall, the majority of the workers (*n*=11) remained in the same risk category pre- to post-intervention, while two experienced a reduction in risk category (*n*=2), and one experienced an increase in risk for stress overload (*n*=1) post-intervention. For workers remaining in the same risk category pre to post intervention, four were in *Low Stress/Lowest Risk*, one remained in the *Challenged/Low Risk* category, and six workers remained in the *High Stress/High Risk* category. When examining the two intervention groups separately, starting with the music-based intervention group, one RN experienced an increase in stress, moving from the *Low/Lowest Risk* category to the *Challenged/Low Risk* category with a three-point increase in personal vulnerability and a five point increase in event load. Conversely, another RN in the music-based intervention group moved from the *High Stress/High Risk* category to the *Fragile Stress/Low Risk* category, experiencing a two-point reduction in personal vulnerability and an eight-point reduction in event load. Only one of the four participants in the mindfulness-based intervention

shifted SOS categories, moving from the *High Stress/High Risk* category to the *Challenged/Low Risk* category, with a two-point reduction in personal vulnerability.

Figure 2

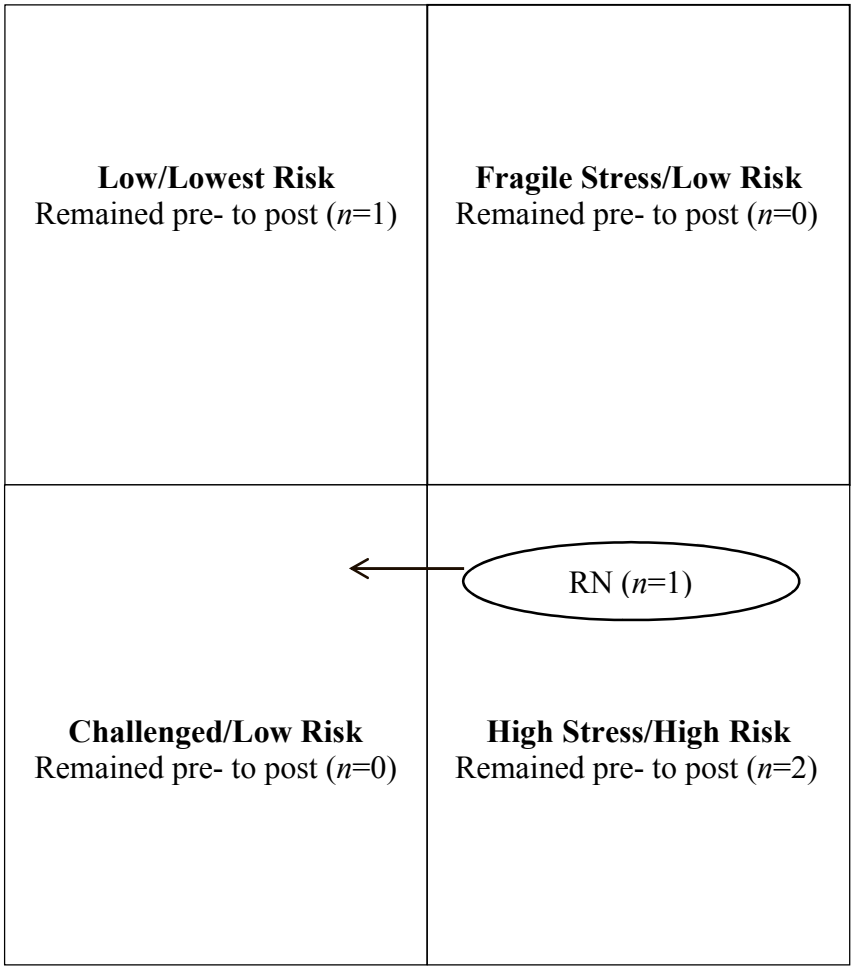
*Music-Based Intervention Participant Changes in SOS Category, Pre- to Post-Intervention (n=10)*




*Note*: Increase in stress category is represented in rectangles. Decrease in stress category is represented in ovals.

Figure 3

*Mindfulness-Based Intervention Participant Changes in SOS Category, Pre- to Post-Intervention (n=4)*




*Note*: Increase in stress category is represented in rectangles. Decrease in stress category is represented in ovals.

The demographic survey also provided supplemental information regarding other commitments and possible stressors (i.e., financial, illness). Four of the 14 workers had missed work over the last month, ranging from 8 to 60 hours. Three workers accessed healthcare services an average of nine times over the last month. Five of the workers

reported holding a job outside of hospice, with the number of hours worked weekly ranging from 8 to 50 hours with a mean of 23.6 hours worked weekly beyond hours worked in hospice. While the SOS outcomes in Amirkhan (2012) indicated that participants in the *High Stress/High Risk* category reported more symptoms, missed days, and practitioner visits, only three of eight workers in the *High Stress/High Risk* category reported these variables in this study.

Stressors reported by participants included both work and personal influences. The most common work stressor was workload (*n*=11), followed by managing patient and family needs (*n*=5), charting (*n*=4), perceived insufficient resources and specific training to do the job (*n*=3), agency changes (e.g., office closure, eliminated employer retirement plan matching, staff reassignments) (*n*=3), work responsibilities (*n*=3), expressed need to support other staff emotionally and spiritually (*n*=1), complicated grieving (*n*=1), and stress due to staff shortages (*n*=1). Personal stressors included family stress/issues and competing demands (*n*=9), finances (*n*=1), and struggle to find a work/life balance (*n*=1).

Comparing the review of literature summary of protective and risk factors for hospice worker's development of stress and burnout (provided in Table 1), to the participant's responses of current stressors and coping strategies, it is evident that the workers have more risk factors than protective factors, potentially resulting in elevated stress and burnout (See Table 3). The use of social support, physical exercise, and involvement in religion or faith, functions as a protective factor for both worker stress and adaptive coping to loss, which could be important for hospice workers (Caserta,

Lund, Utz, & de Vries, 2009; Richardson, 2006). The increased number of risk factors was also seen in participant's ProQOL mean scores for burnout and secondary traumatic stress. While mean burnout scores for both treatment groups were above the average score of 50 by five points or less, secondary traumatic mean scores were consistently above the high end score of 57 for both pre- and post-intervention measures. These scores suggest that this group of hospice workers experience traumatic stress from the helping relationship as part of job demand. In addition to the higher number of risk factors seen in Table 3, the workers also had mean compassion satisfaction scores above the average of 50, ranging from 51.75-55.90 post-intervention. Higher compassion satisfaction scores decrease the potential for developing depression due to the feeling of satisfaction as a result of participating in helping work (Stamm, 2010).

Table 3

*Comparison of Summary of Review of Literature for Hospice Worker's Protective and Risk Factors for Development of Stress and Burnout to Participant Responses*

| Protective Factors | Risk Factors |
|---|---|
| • Social support | • Maladaptive coping skills |
| • Physical exercise* | • Over commitment |
| • Religion/Faith* | • Compassion fatigue |
| • Family involvement | • Emotional exhaustion |
| • Vacation time | • Depersonalization |
| • Planful problem-solving | • Boredom |
| • Acceptance of responsibilities | • Anxiety |
| • Positive reappraisal | • Job demands* |
| • Empowerment | • Psychological strain* |
| • Compassion satisfaction* | • Role ambiguity* |
| • Job control | • Role conflict* |
| • Job rewards | • Workload* |
| • Job resources | • Lack of resources/training* |
| | • Complicated grieving |
| | • Inability to disengage from work* |
| | • Reduced personal accomplishment |

Note: * Indicates factor was included in participant's survey response in comparison to protective and risk factors identified in the review of literature

**Professional Quality of Life Scale (ProQOL)**

The ProQOL measures how people in helping roles have felt over the last 30 days relating to compassion satisfaction, burnout, and secondary traumatic stress/compassion fatigue. Participant ratings for the ProQOL were transferred from the JotForm (http://www.jotform.com) output Excel file, and were hand coded on their respective score sheets. Items 1, 4, 15, 17, and 29 were reverse scored as indicated in the manual,

and then the sums for Compassion Satisfaction, Burnout, and Secondary Traumatic Stress were calculated as indicated on page 16 of the ProQOL Manual (2nd Edition). Raw scores for Compassion Satisfaction, Burnout, and Secondary Traumatic Stress were converted to *t*-scores using the table beginning on page 31 of the manual. *T*-scores for pre and post ProQOL measures (i.e., Compassion Satisfaction, Burnout, Secondary Traumatic Stress) were then added to the Excel file, and loaded into SPSS for data analysis. The typical mean *t*-score for compassion satisfaction is 50 (*SD*=10, $\alpha$=.88); scores above 57 indicate a high level of compassion satisfaction, and scores below 40 signify possible problems with the participant's job. The mean *t*-score for burnout is 50 (*SD*=10, $\alpha$=.75); scores above 57 indicate participants do not feel effective at work, and scores below 18 show participants feel positive about their work effectiveness. The mean *t*-score for secondary traumatic stress or compassion fatigue is 50 (*SD*=10, $\alpha$=.81); a score over 57 indicate a need to reflect on what aspect of work is perceived as traumatic or stressful.

In order to examine the possible effect of a music-based intervention on hospice workers' professional quality of life, the researcher compared pre- and post-intervention mean *t*-scores on the ProQOL in the areas of compassion satisfaction, burnout, and secondary traumatic stress. Further statistical analysis was not performed due to the small sample size and unbalanced participant groups. Workers' Compassion Satisfaction (CS) *t*-scores pre-intervention (*M*=55.40, *SD*=8.14) to post-intervention (*M*=55.90, *SD*=9.05) remained essentially consistent with only a minimal increase in worker's compassion satisfaction with use of the music-based intervention. Burnout (BO) mean *t*-scores pre-intervention (*M*=54.30, *SD*=5.83) compared to post-intervention (*M*=54.50, *SD*=6.50)

also remained essentially unchanged with just a minimal increase in workers feeling burned out. The mean *t*-score for Secondary Traumatic Stress (STS) pre-intervention (*M*=61.90, *SD*=7.71) to post-intervention (*M*=59.90, *SD*=7.28) revealed a minimal decrease after listening to the music-based intervention (See Table 4).

A comparison of means pre- and post-intervention was also conducted for the mindfulness-based intervention group for the same ProQOL measures. Participants' ProQOL mean compassion satisfaction t-scores pre-intervention (*M*= 51.75, *SD*=13.60) to post-intervention (*M*=51.75, *SD*=12.09) resulted in no change in compassion satisfaction. The mean t-scores for burnout pre-intervention (*M*=52.00, *SD*=7.44) compared to post-intervention (*M*=55.00, *SD*=4.69) showed a slight increase in worker's burnout. The mean t-scores for Secondary Traumatic Stress (STS) pre-intervention (*M*=66.75, *SD*=6.29) to post-intervention (*M*=68.25, *SD*=4.65) revealed a slight increase in worker's STS (See Table 3) following the use of the mindfulness-based intervention.

Table 4

*ProQOL Means and Standard Deviations*

| Condition | CS *t*-score (Pre) | CS *t*-score (Post) | BO *t*-score (Pre) | BO *t*-score (Post) | STS *t*-score (Pre) | STS *t*-score (Post) |
|---|---|---|---|---|---|---|
| Music | | | | | | |
| Mean | 55.40 | 55.90 | 54.30 | 54.50 | 61.90 | 59.90 |
| Std. Deviation | 8.14 | 9.05 | 5.83 | 6.50 | 7.71 | 7.28 |
| Mindfulness | | | | | | |
| Mean | 51.75 | 51.75 | 52.00 | 55.00 | 66.75 | 68.25 |
| Std. Deviation | 13.60 | 12.09 | 7.44 | 4.69 | 6.29 | 4.65 |

**Perceived Control, Stress, and Burnout**

Participants rated their perceived levels of control, stress and burnout pre- and post-intervention on three individual five-point Likert scales. Scale markers included: 1=no control/stress/burnout, 3=moderate control/stress/burnout, and 5=high control/stress/burnout.

Participants in the music-based intervention self-reported minimal change from pre- to post-intervention on individual measures of control, stress, and burnout. Participants self-reported perceived control in the work environment from pre-intervention (*M*=3.00, *SD*=.94) to post-intervention (*M*=2.90, *SD*=.57), showed a slight decrease. Conversely, participants' self-reported stress pre-intervention (*M*=4.00, *SD*=1.05) to post-intervention (*M*=3.40, *SD*=.97) revealed a slight decrease in participants perceived stress with use of the music-based intervention. A minimal increase in perceived burnout was seen pre-intervention (*M*=2.80, *SD*=1.03) to post-intervention (*M*=2.90, *SD*=.88) (See Table 5).

Participants in the mindfulness-based intervention self-reported minimal change from pre- to post-intervention on individual measures of control, stress, and burnout. Participants self-reported perceived control in the work environment pre-intervention (*M*=3.50, *SD*=.58) to post-intervention (M=3.00, SD=.82), showed a slight decrease in perceived control. Conversely, self-reported stress pre-intervention (*M*=3.75, *SD*=.96) to post-intervention (*M*=4.00, *SD*=1.15) revealed a slight increase in participants perceived stress with use of the mindfulness-based intervention. A minimal increase in perceived

burnout was seen pre-intervention (*M*=2.25, *SD*=.96) to post-intervention (*M*=2.50, *SD*=1.00) (See Table 5) with use of the mindfulness-based intervention.

Table 5

*Participants Self-Reported Levels of Perceived Control, Stress, and Burnout Related to Work*

| Condition | Perceived Control (Pre) | Perceived Control (Post) | Perceived Stress (Pre) | Perceived Stress (Post) | Perceived Burnout (Pre) | Perceived Burnout (Post) |
|---|---|---|---|---|---|---|
| Music | | | | | | |
| Mean | 3.00 | 2.90 | 4.00 | 3.40 | 2.80 | 2.90 |
| Std. Deviation | 0.94 | 0.57 | 1.05 | 0.97 | 1.03 | 0.88 |
| Mindfulness | | | | | | |
| Mean | 3.50 | 3.00 | 3.75 | 4.00 | 2.25 | 2.50 |
| Std. Deviation | 0.58 | 0.82 | 0.96 | 1.15 | 0.96 | 1.00 |

*Will a particular musical element be perceived as more beneficial in decreasing hospice worker's stress and increasing professional quality of life?*

Participants in the music-based intervention group were asked to evaluate which elements they perceived as most and least beneficial. Options included (a) key; (b) tempo; (c) melody; (d) timbre; (e) rhythm; (f) harmony; and (g) instrumentation. When looking at the most and least effective musical elements, participants were able to indicate more than one musical element in their response on the post intervention survey. Responses for most effective musical element of those in the music-based intervention indicated: tempo (*n*=5); rhythm (*n*=5); instrumentation (*n*=4); harmony (*n*=2); melody (*n*=2); key (*n*=0). Conversely, least effective musical elements were: melody (*n*=4); key (*n*=4); instrumentation (*n*=3), rhythm (*n*=2); tempo (*n*=2); and harmony (*n*=1).

Participants in the mindfulness-based intervention group were asked to evaluate which elements they perceived as most and least beneficial. Options included (a) tempo; (b) timbre; and (c) rhythm. For the mindfulness-based intervention, participants felt tempo ($n$=3) and timbre ($n$=3) were most effective, while rhythm ($n$=3) and timbre ($n$=1) were considered the least effective musical elements by the participants in that condition.

*Do participants perceive the use of an online intervention beneficial?*

Twelve of the 14 participants (86%) felt that the use of an online intervention was beneficial for helping manage stress and burnout, with one participant in each treatment group indicating he/she did not feel an online intervention was beneficial. Participant feedback from the music-based intervention participants regarding the benefits of an online intervention included feeling soothed and relaxed with less focus on the stressors, and an increased ability to remain focused with fewer wandering thoughts. Two participants in the music-based intervention indicated it was convenient and quick, fitting well into busy schedules. Another participant in the music-based intervention stated it was very easy to use, and liked that implementation could occur when it fit into the worker's schedule without needing to travel and attend a "class." One participant in the music-based intervention specifically commented on the tempo and rhythm of the music helping her feel more relaxed and meditative. One participant in the mindfulness-based intervention felt a group intervention before the weekly interdisciplinary team meeting would function better, and would also build team cohesion and increase social support.

Participants were also asked to indicate from a list of options or a write-in response on how time was spent while engaged in the intervention. Most participants

(*n*=8 in music-based intervention; *n*=2 in mindfulness-based intervention) had eyes closed while listening, with deep breathing (*n*=5 in music-based intervention; *n*=1 in mindfulness-based intervention) commonly used. Less used activities included picturing images (*n*=4 in music-based intervention; *n*=1 in mindfulness-based intervention), or visualizing the instruments playing (*n*=1 in music-based intervention).

*Would participants continue to use an online intervention whether or not it would be supported by the agency?*

A majority of the participants (*n*=8) reported they would continue to use an online intervention if it was supported by the agency. The remaining workers (*n*=6) responded "maybe." When looking specifically at worker's interest in continued self-implementation without direct agency support, most indicated "maybe" (*n*=8), with only four participants indicating yes, and two responding no.

All participants currently engaged in at least one coping strategy as indicated in survey responses. Almost all participants (*n*=13) viewed involvement in faith as a coping strategy. The other most prevalent coping strategies workers reported were using music for relaxation (*n*=8), exercise (*n*=8), meditation (*n*=4), yoga (*n*=3), crafts (*n*=2), while individual write-in responses included counseling (*n*=1), reading (*n*=1), and horses (*n*=1).

*What factors affected implementation of the intervention, and how could implementation vary in the future?*

The biggest hindrance to engaging in the interventions presented in the current study included workers feeling they had limited time available to participate (*n*=10), and the environment in which they participated in the intervention (*n*=7). Other elements that

affected people's participation in the study included other people present (*n*=5), workload (*n*=3), and the assigned intervention not being preferred by the worker (*n*=2). Related to participants' comments about the environment and other people deterring their engagement in the study, most participants participated at home (*n*=7), while others were at desks (*n*=5), or moved to a conference room (*n*=2). A majority of the participants used their computer to listen to the intervention (*n*=10), while iPad/tablet (*n*=1), headphones into a computer (*n*=1), earbuds into a computer (*n*=1), and smartphone (*n*=1) were used minimally.

The researcher looked at the time of day or night the intervention was accessed. A majority of the participants (*n*=9) engaged in the study between 8:01am and 5:00pm. Four participants engaged in the study between 5:01pm and 12:00 am, and one engaged between 12.01 am and 8:00 am. These results indicate that workers primarily utilized the interventions during the professional work day when they were most active.

Looking at future use, the workers provided many suggestions to encourage engagement in the future such as scheduling planned time alone or moving to a different environment to have fewer people present. Three people indicated it was difficult to put work aside, so future implementation might need to occur in a space away from desks or work materials. One person requested the music be available on CD in order to implement the intervention in the car between visits. One worker felt consistent encouragement to practice the intervention would be necessary, noting that the outcome would be greater with more practice over time.

*What intervention(s) [Music, Meditation, Both, Neither] would participants be more likely to use in the future?*

An equal number of the participants indicated they would be likely to either use a music-based intervention (*n*=5 in music-based intervention; *n*=1 in mindfulness-based intervention), or a combination of music and meditation interventions (*n*=3 in music-based intervention; *n*=3 in mindfulness-based intervention) in the future. Only two participants (one from each intervention group) expressed an interest in only meditation for use in the future. All participants selected one or both intervention types included in this study, with no additional write-in options submitted by participants when given the option.

# CHAPTER V

# DISCUSSION

Professional quality of life is determined by a balance of compassion satisfaction to burnout and secondary traumatic stress. Prolonged periods of high stress can result in burnout, which is a work related mental health impairment that consists of emotional exhaustion, depersonalization and reduced personal accomplishment from a social relationship between a helper and a help recipient (Awa et al., 2010). Hospice workers experience prolonged stress due to working autonomously in a highly emotional field with limited control in the work environment and recurring loss of relationships with the patients and families to whom they provide care.

Due to the small sample size attained in this study, a definitive answer regarding whether a music-based or mindfulness-based intervention is more effective for managing hospice workers' stress and professional quality of life is not possible at this time. The current limited findings indicate that participants in the music-based intervention group experienced minimal decreases in their overall Stress Overload Scale (SOS) score, SOS personal vulnerability score, secondary traumatic stress as measured by the Professional Quality of Life Scale (ProQOL), and self-reported perceived stress and control level from pre- to post-intervention through use of three separate 5-point Likert-type scales. Though participants in the music-based intervention experienced minimal decreases in these areas, participants also experienced a slight increase in SOS event load and self-reported perceived burnout.

Participants in the mindfulness-based intervention showed a minimal decrease in their perceived control which is contrary to the intended outcomes, and had a minimal decrease in SOS personal vulnerability. In comparison to the music-based intervention, participants in the mindfulness-based intervention had slight increases in overall SOS score, SOS event load, ProQOL burnout and secondary traumatic stress, as well as perceived stress and burnout. When looking at overall effectiveness it appears that the music-based intervention was slightly more effective than the mindfulness-based intervention, though results are inconclusive due to the small sample size, and cannot be generalized beyond the present sample.

**Personal Vulnerability and Event Load**

Both the music-based intervention and the mindfulness-based intervention had a positive impact on some participant's stress levels as seen in SOS shifts from pre- to post-intervention. The data indicated that both the personal vulnerability (PV) and event load (EL) scores were decreased for one of the five workers in the *High Stress/High Risk* category after listening to the music-based intervention. Looking at the design of the SOS scale, if the PV score for those in *High Stress/High Risk* category can be decreased below 31 points, than coping skills are enhanced despite an EL score of 41 to 60 points as workers would perceive themselves to be less vulnerable to stress despite the number of stressors related to event load. Two workers who remained in the *High Stress/High Risk* category (one in each intervention condition) were within two points or less of being rated in the *Challenged/Low Risk* category, showing a positive shift in PV.

Results of the data from the current study conflict with the significant reductions in both continuous SOS and PV scores, and the decrease in EL scores found in Fiore (2014a). It may be that students were more comfortable accessing online resources and completing a study online than the hospice workers, or the discrepancy in findings could indicate that the intervention works for short-term, situational stressors experienced by students (e.g. final class projects, final exams). The limited dosage provided in this study may not be effective for long-term chronic stress seen in the workplace as compared to short-term acute student stress. It is possible that the intervention could be effective with a change to an in-person intervention delivery and/or frequency, as sustained practice could provide a coping strategy to manage stress and decrease the potential for burnout.

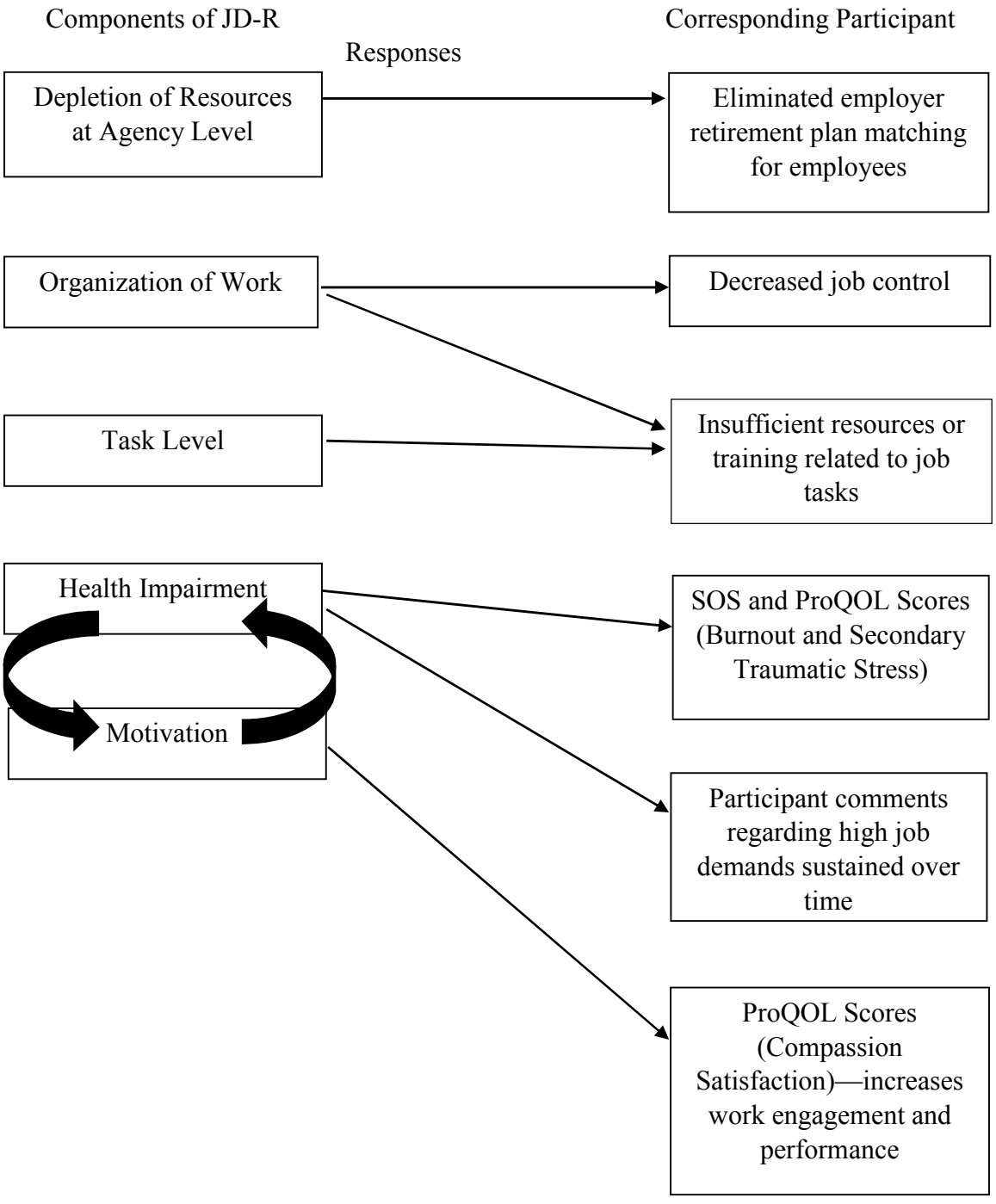
**Application of Results to Job Demands-Resources Model (JD-R)**

The Job Demands-Resources model (JD-R) adequately represents hospice workers stress and potential for burnout (Demerouti et al., 2001). Participants in this current study indicated in his/her survey responses a depletion of resources at the agency level (i.e., elimination of retirement fund matching by the agency) and organization of work as seen through reported low levels of job control and indications of insufficient resources or specific trainings related to the job. The perceived lack of resources and training could also impact the task level in regards to individual skill sets. Workers have some access to interpersonal and social resources through weekly interdisciplinary meetings, though the autonomous nature of the work making home visits could limit the perceived benefit of social support. The JD-R model also indicates the need for balance between strain and motivation, which requires two psychological processes—health

impairment and motivation. Workers in the current study exhibited health impairment as scores. Their comments indicated a high level of job demand over time. Motivation for this group of hospice workers could be represented in the high compassion satisfaction scores that increase engagement and work performance, and serve as a protective factor for cynicism and maladaptive coping (See Figure 4).

Figure 4

*Application of Results to the Job Demands-Resources Model*



**Therapeutic Function of the Music**

When reflecting on the music recording, participants in this study deemed tempo and rhythm the most effective musical elements, which supports the TFM analysis to begin the intervention with strong pulses on beat one at a tempo of 72 bpm to establish entrainment, with decreased complexity of the rhythmic structure and tempo throughout the composition (Fiore, 2014c). One participant commented that the rhythm and tempo helped her feel more relaxed and meditative. Melody and key were seen as the least effective musical elements. This indication contradicts previous use of the recording with music therapy students who rated melody as the most effective element (Fiore, 2014a). It is possible that the variance in perceived effectiveness of the musical elements relates to one sample being musicians, and the other non-musicians. While definitions of the musical elements were provided to participants, limited experience identifying and analyzing individual musical elements could have impacted participants' responses to indicate which elements were most and least beneficial. In the future, definitions of the musical elements should be identified before listening in order to provide a framework for the participants to respond after the listening experience. It is also possible that the complexity of the music, or of a specific music element, was optimal for music students, but was too complex for participants who are non-musicians. According to Walker's "hedgehog" theory, preference is greater when there is optimal complexity, but too much or too little complexity results in less preference (Radocy & Boyle, 1997).

**Benefits of Implementation**

Decreasing hospice workers' stress could decrease frequency of illness, the number of times healthcare is accessed, and the number of hours of work missed due to illness or feeling overwhelmed. A decrease in illness and healthcare visits could save workers money for visit co-pays and medications. Workers with decreased stress would be more focused and productive, better able to provide a high level of care to both patients and families, maintain effective interpersonal relationships, and manage responsibilities better. Online music-based or mindfulness-based interventions could provide hospice workers and other professionals a coping mechanism that would be available when needed, and could be utilized on a laptop, smartphone, or mp3 player, no matter what time of the day or night. Online interventions could also help workers manage personal stress, which could impact workers' therapeutic effectiveness by being more emotionally available to clients and family members.

Looking beyond the hospice setting, the music-based intervention could be used with both clients and professionals in other stressful environments to support use of good coping skills. Clients undergoing painful procedures could access the intervention through a cell phone or tablet while waiting or receiving treatment. Professionally, an online intervention would be beneficial in many work settings as demands placed on employees have increased and responsibilities are reassigned when vacant positions are not filled. Professionals would be able to access an online intervention to help manage work stress, decrease frequency of illness, and increase productivity, which would provide financial gains for employers. Music therapists can use the outcomes of this

study to help inform clinical practice when working with clients who are undergoing prolonged periods of stress.

**Limitations, Delimitations, and Assumptions**

The current study's limitations do not allow for generalization of the results. Limitations include sample size, workplace stressors, use of technology, understanding of the research process, and intervention delivery. The interaction of these limitations, decreased the overall participation in the current study.

The greatest limitation was the total number of participants included in the study, including unbalanced participant groups and gender unevenness overall and within the groups. Replication of this study needs to include a larger population sample in order to determine if the results from the current study are sound and apply to hospice workers on a broader scale, and to see if there is a greater impact of the intervention with a larger population compared to the current study. The uneven number of participants between groups does not allow for a direct comparison of the results, and further limits the generalization of the outcomes relative to the small sample size. Despite limited overall participation, the majority of workers (86%) completing the interventions in the current study perceived the interventions to be beneficial. It is possible that a larger sample size would have been possible if there had not been as many workplace stressors occurring at the same time as the current study.

The participating hospice agency also went through multiple changes during the time the current study was implemented. Changes included closing one office and moving all of the employees to another established office, eliminating employer

retirement contributions, staffing reassignments between teams to meet discipline staff needs related to the patient census which resulted in navigating new colleague relationships, changing work assignments, and increased driving. Staff turnover also increased caseloads and the amount of overtime worked. During the implementation of this study, there were eight full-time patient care job openings, with most in nursing. The hospice nurses at this agency managed a caseload of 12 patients, which is slightly higher than the national average of 11.2 (NHPCO, 2014). Many participants commented on the agency changes in the post-intervention survey as either current stressors or factors impacting engagement in the study. Based on these comments it is likely that other workers felt similar stressors within the work environment, and this may have deterred them in participating in the current study. Workers may have chosen to not participate in order to have one less task to manage, instead of seeing the intervention as a coping strategy to manage stress and burnout. This concept is supported by the outcomes of Klein and Verbeke (1999) concluding that workers may choose to not engage in optional activities that do not directly impact them personally. From an organizational perspective, when organizations do not provide or limit job resources, workers engage in long-term withdrawal from work, and have reduced motivation and commitment (Bakker, Demerouti, De Boer et al., 2003). Additionally, workers who have high levels of stress and burnout experience emotional exhaustion, which may decrease work effort, and limit organizational citizenship behaviors of extra-role performance which promote effective functioning within the work environment without changing a worker's efficiency (Bakker, Demerouti, & Verbeke, 2004).

One hospice worker emailed after the final solicitation email had been sent stating she had wanted to participate in the study from the beginning, but reported having a difficult time setting aside 20 minutes to participate. Another worker emailed after participating to suggest future implementation prior to weekly team meetings, stating "this is important since we are lacking self-care to keep our minds healthy." Future studies could acknowledge hospice staff attending to multiple stressors within the solicitation email, with a statement indicating that the following intervention(s) was/were designed to help manage work stress.

Technology problems and limited access to technology for some disciplines also limited participation in the study. Three hospice workers reported technology problems which inhibited participation in the study. The first worker emailed that she used the back-up link for the listening experience, then went back to the solicitation email again to complete the post-intervention measures, which took her back to the beginning of the study. Another worker emailed that she had completed the study and had felt the experience was beneficial, but the data was never received through the JotForm site. It is possible the worker exited out of the web browser without clicking the submit button to conclude the study. The third worker emailed to notify the researcher that the music link had gotten stuck, with the music looping for 30 minutes. The researcher responded immediately, and instructed the worker to click the button below the music-based intervention box to proceed to the post-intervention measures. No data was received from the worker's discipline that day, so most likely the worker never completed the study. The home-health aides employed by the hospice do not have laptops or tablets, so

participation for the study necessitated using a smartphone. Depending on level of comfort using a smartphone, this could have contributed to the limited participation from that discipline. Due to this self-selected setting, playback quality of the interventions varied among participants as it was not possible to control for this variable with the study being available online.

The hospice workers solicited for the current study may also have limited experience participating in research studies. This was evidenced by several comments to the researcher during and after study. One hospice worker indicated she had participated in the study, felt it was beneficial, but asked if she had completed the study correctly due to answering the same questions twice. When informed that the measures was presented pre- and post-intervention, the worker stated that she had not participated correctly as she had attempted to answer the post-intervention questions the same as the pre-intervention questions since she thought the study had started over. It is also possible that the hospice workers were hesitant to participate in the current research study due to being asked to disclose personal information to the researcher who was also employed at the hospice.

Delimitations related to intervention delivery include timing of solicitation emails, and future use of an intervention. Time of day needs to be considered when sending solicitation emails as emails sent in the afternoon were more successful than the initial solicitation sent at the beginning of the workday. The initial solicitation email was sent 30 minutes before the scheduled workday began, and resulted in only one participant responding. This is most likely due to workers having just arrived at work and needing to manage the tasks of the day. Workers could also have lower stress levels in the morning

due to being away from the work environment and having rested and relaxed after completing the previous day's work. Solicitations sent in the afternoon were more successful as hospice workers had already managed many of the immediate needs, and were more likely to be charting at the end of the day. In the future, emails for invitation to participate for hospice workers should be sent out in the afternoon. Though most workers were uncertain if they would continue to use an online intervention in the future, it is possible that workers would be open to future use of an intervention if supported by the agency and given the option for self-implementation. This response would support the outcome by Ahola et al. (2007) indicating that interventions provided by the employer, or a combination of those provided by the employer and designed specifically for individuals, will result in outcomes that last longer than interventions targeted to the individual alone.

The researcher had an assumption before conducting the current research study pertaining to participation. Since the researcher had been employed by the participating hospice for over 10 years, the researcher assumed more workers would engage in the study due to a previous professional relationship with the researcher.

**Future Directions**

The results of this study suggest that repeated practice with a stress management intervention is necessary to see positive outcomes. As evidenced by the limited results of this study, dosage is an important consideration for future studies. In order to address dosage and minimize the impact of limited experience online resources, the study could be implemented in one of two ways. First, an initial solicitation email could be sent to

invite interested participants to attend an initial session in-person, with eligible participants providing an RSVP. Those interested in participating could be randomized to treatment conditions and sent an email with a time and place to attend the initial in-person session. The in-person session for each treatment condition could be hosted at two different times allowing the researcher to meet with each group separately. During the session, pre-intervention measures could be completed online, allowing the researcher an opportunity to provide technical support to those in need, and then the intervention could be provided free-field. After listening, participants could go back online to complete the post-intervention measures. After the initial in-person session, interventions could be made available to participants online, with weekly email blasts serving as encouragement for continued use. After multiple weeks of providing email blasts for continued use, the researcher could then have the participants return for an in-person follow-up session, with the format being the same as the initial in-person session. A modification to this delivery method would be to only have the measures completed online, but have the interventions provided in-person before weekly interdisciplinary team meetings. Providing the intervention in-person before team meetings could increase use of coping strategies, while providing social support and building team cohesion. In this modified delivery approach participants could serve as his/her own control, with the researcher providing the music-based intervention one week, and the mindfulness-based intervention the next week.

The point of intervention is another component to consider with intervention delivery. Participants in this study had worked in hospice anywhere from 6 months to 17

years, with an average of 5.67 years. The interventions provided in this study were reactive to existing stress, whereas a preventive intervention before the stress begins could be more beneficial. The initial years of working in hospice could be considered the most stressful as workers are adjusting to the hospice environment (e.g., driving to make patient visits, managing patient and family interactions, experiencing recurrent loss, changing workloads), and this could be exacerbated for workers who are new to the discipline as well as the work setting. Six of the workers in this study had three years or less experience in hospice, with five workers having an initial continuous stress overload score in the high stress SOS category, and only one having an initial continuous stress overload score in the low stress category. Coping skills need to be addressed as workers begin their jobs to provide coping strategies that can be implemented as both a preventive and reactive intervention in response to work stressors. Employers could provide coping skills training during orientation, and continue to encourage use of coping skills through use of online interventions, team based interventions, and continuing education regarding the use of various coping strategies. Recurrent training and use of coping skills could help workers better manage daily stressors both on the job and in their personal lives.

Due to the limited engagement in the current study, it is difficult to conclude if either an online music-based intervention or an online mindfulness-based intervention were effective for hospice workers' stress and professional quality of life. Limited engagement could be related to overall high stress levels, excessive workloads, and little personal experience using online interventions for stress management. Workers in the current study experienced many changes within the agency setting. It is possible that the

interventions used in this study would be more effective if the hospice workers were not managing additional stressors in the workplace beyond the anticipated stressors of providing hospice care (e.g. providing patient care, managing family dynamics, and repeat exposure to grief and loss). Related to the agency changes, many workers commented on workloads or staff shortages. It is possible that the interventions could help manage stress and professional quality of life when staffing ratios are more balanced as this could allow workers to feel they have time in their schedules to practice self-care. Future studies could manage the limited personal experience by providing an initial session in person to provide education and any necessary training on how to access the intervention. A training session could also help build community between participants, which could serve as a support and reminder for continued use of the intervention. Email blasts could be used as follow-up reminders for continued use of the intervention over time. Since workers have limited cubicle space within the office, another option would be to provide headphones or earbuds to future participants to decrease the feeling of interrupting other workers around if choosing to listen to the interventions at his/her desk. Future studies could also investigate the impact of social support provided in the inpatient hospice setting to the autonomous field work experience, to see if social support impacts the potential for stress and burnout in the hospice work setting.

Over time, hospice workers can experience prolonged stress related to the helper and help recipient relationship, which can lead to professional burnout and a possible career change. Use of a music-based intervention, mindfulness-based intervention, or a combination of the two to help manage hospice workers stress and burnout could help

cope with the emotional and physical demands of the job, and potentially decrease the frequency of burnout among hospice workers. For professionals, access and ability to self-implement an intervention is an important coping mechanisms that may be used to effectively manage stress and burnout.

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# APPENDICES

## APPENDIX A

## Information Statement

**Information Statement**

The Department of Music Education & Music Therapy (MEMT) at the University of Kansas supports the practice of protection for human subjects participating in research. The following information is provided for you to decide whether you wish to participate in the present study. You should be aware that even if you agree to participate, you are free to withdraw at any time without penalty.

We are conducting this study to compare the effectiveness of a music-based relaxation intervention and mindfulness-based intervention for hospice workers stress and burnout. This will entail your completion of a questionnaire, psychological measures, and randomized participation in either an online music-based relaxation intervention, or an online mindfulness-based intervention. Your participation is expected to take approximately 15-20 minutes to complete. The content of the survey should cause no more discomfort than you would experience in your everyday life.

Although participation may not benefit you directly, we believe that the information obtained from this study will help us gain a better understanding of how either music-based relaxation interventions or mindfulness-based intervention can be used to help hospice workers develop coping skills related to stress and burnout. Participation in this study could result in decreased stress. Your participation is solicited, although strictly voluntary. Your name will not be associated in any way with the research findings. Your identifiable information will not be shared unless (a) it is required by law or university policy, or (b) you give written permission. Each participant will create their own unique identification number, so information will be kept anonymous.

It is possible, however, with internet communications, that through intent or accident someone other than the intended recipient may see your response. Due to a limited numbers of male hospice workers this may result in their information being more identifiable.

If you would like additional information concerning this study before or after it is completed, please feel free to contact us by phone or mail.

Completion of the questionnaire and psychological measures indicates your willingness to take part in this study and that you are at least 18 years old. If you have any additional questions about your rights as a research participant, you may call (785) 864-7429 or write the Human Subjects Committee Lawrence Campus (HSCL), University of Kansas, 2385 Irving Hill Road, Lawrence, Kansas 66045-7563, email irb@ku.edu.

Sincerely,

Jennifer Fiore, MME, MT-BC
Principal Investigator
Department of MEMT
448 Murphy Hall
University of Kansas
Lawrence, KS 66045
(785) 864-4784
jfiore@ku.edu

Cynthia Colwell, Ph.D., MT-BC
Faculty Supervisor
Department of MEMT
448 Murphy Hall
University of Kansas
Lawrence, KS 66045
(785) 864-4784
ccolwell@ku.edu

## APPENDIX B

## Music-Based Intervention Questionnaire

Unique ID number: _____

Age _____

Gender: Male or Female

Professional discipline (check one):

Physicians (DR) Advanced Practice Nurse (APN) Registered Nurses (RN) Licensed Practical Nurses (LPN) Home-health Aides (HHA) Care Partners (CP)

Social Workers (SW) Chaplains (CHP)

Length of time in profession: _____

Length of time working in hospice: _____

Primary work setting: Hospice House or field staff

Number of hours worked per week in hospice: _____

Number of hours worked during current shift at time of participation: _____

Number of hours worked concurrently at jobs other than hospice: _____

Number of times healthcare was accessed for self over the last month: _____

Number of work hours missed in last month due to your illness: _____

Perceived level of control in his/her job

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No control | | Moderate control | | Lots of control |

Perceived level of stress

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No stress | | Moderate stress | | High stress |

Narrative identification of current stressors: _____

_____

Perceived level of burnout

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No burnout | | Moderate burnout | | Burned out |

Current coping methods (Check all that apply):

Meditation
Music for relaxation
Yoga
Exercise
Journal
Faith
Other: _____

**[Complete SOS and ProQOL]**

***Online Music-Based Intervention***

**Post Intervention**

While listening, I… (check all that apply)

Closed my eyes
Actively listened
Meditated
Practiced deep breathing
Pictured images in my mind
Other: _____

Where did you listen?

Desk
Car
Office
Outside
Home
Other: _____

How did you listen? (check all that apply)

Headphones
Earbuds
Smartphone
Computer
iPad or Tablet
Speakers

What element(s) of the music did you find the most effective? (check all that apply)

Melody (the tune or sequence of single notes)
Harmony (notes in combination to support the melody)
Rhythm (timing of musical sounds and silence)
Tempo (pace of the music)
Instrumentation (instruments playing music)
Key (set of notes to be used with the melody)
Other: _____

What element(s) of the music did you find the least effective? (check all that apply)

Melody (the tune or sequence of single notes)
Harmony (music that supports the melody)
Rhythm (timing of musical sounds and silence)
Tempo (pace of the music)
Instrumentation (instruments playing music)
Key (set of notes to be used with the melody)
Other: _____

Do you feel an online intervention is beneficial? Yes or No

Explain: _____

Would you continue to use an online intervention if it was provided or encouraged by the agency?

Yes No Maybe

Would you continue to use an online intervention on your own?

Yes No Maybe

What affected you engaging in the intervention? (Check all that apply):

Workload
Available time
Environment
Other people present
Not a preferred type of intervention
Other: _____

What could make implementation easier in the future? _____
_____

What intervention(s) would you be more likely to use in the future?

Music
Meditation
Both
Neither

Perceived level of control in his/her job

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No control | | Moderate control | | Lots of control |

Perceived level of stress

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No stress | | Moderate stress | | High stress |

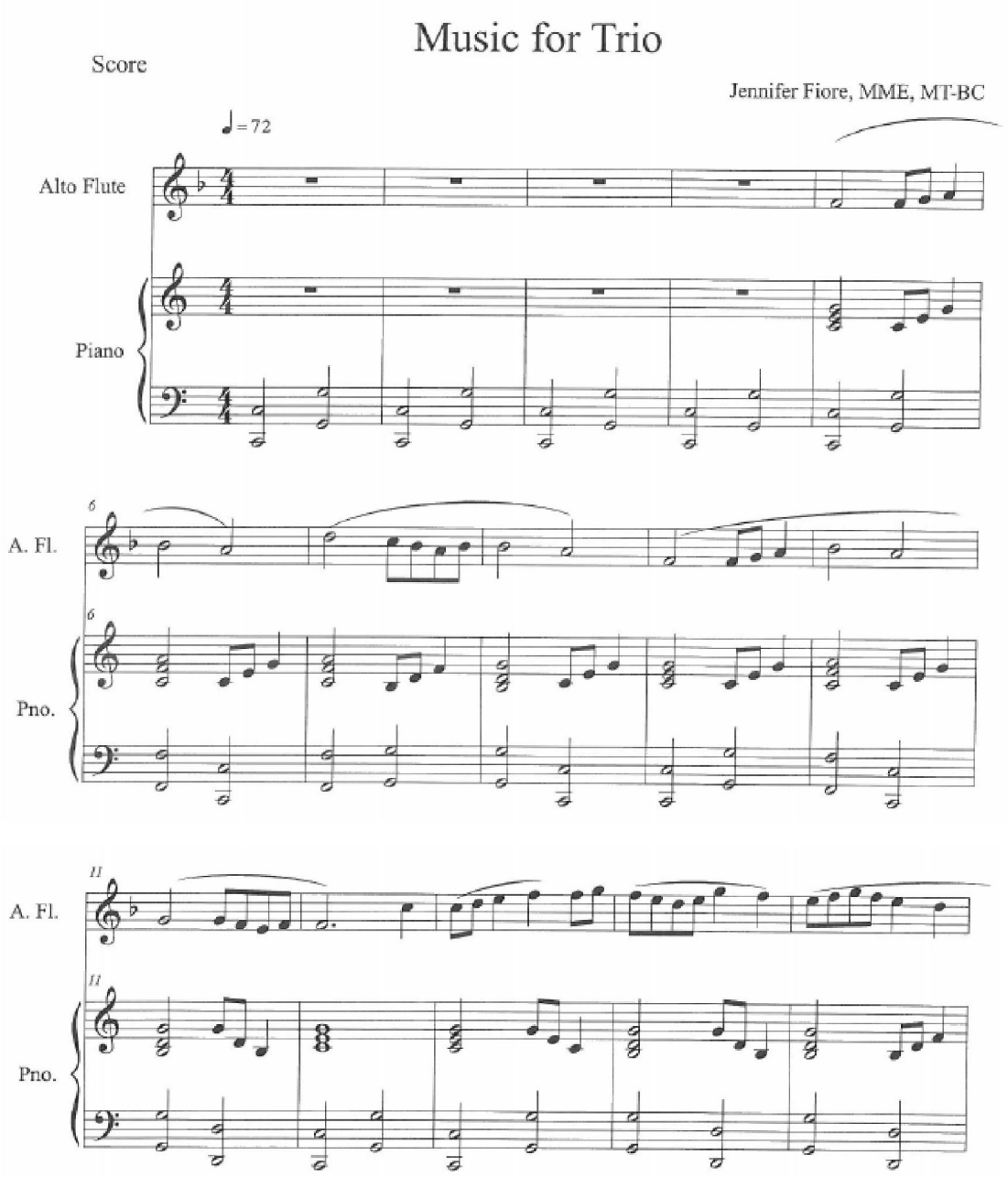
Perceived level of burnout

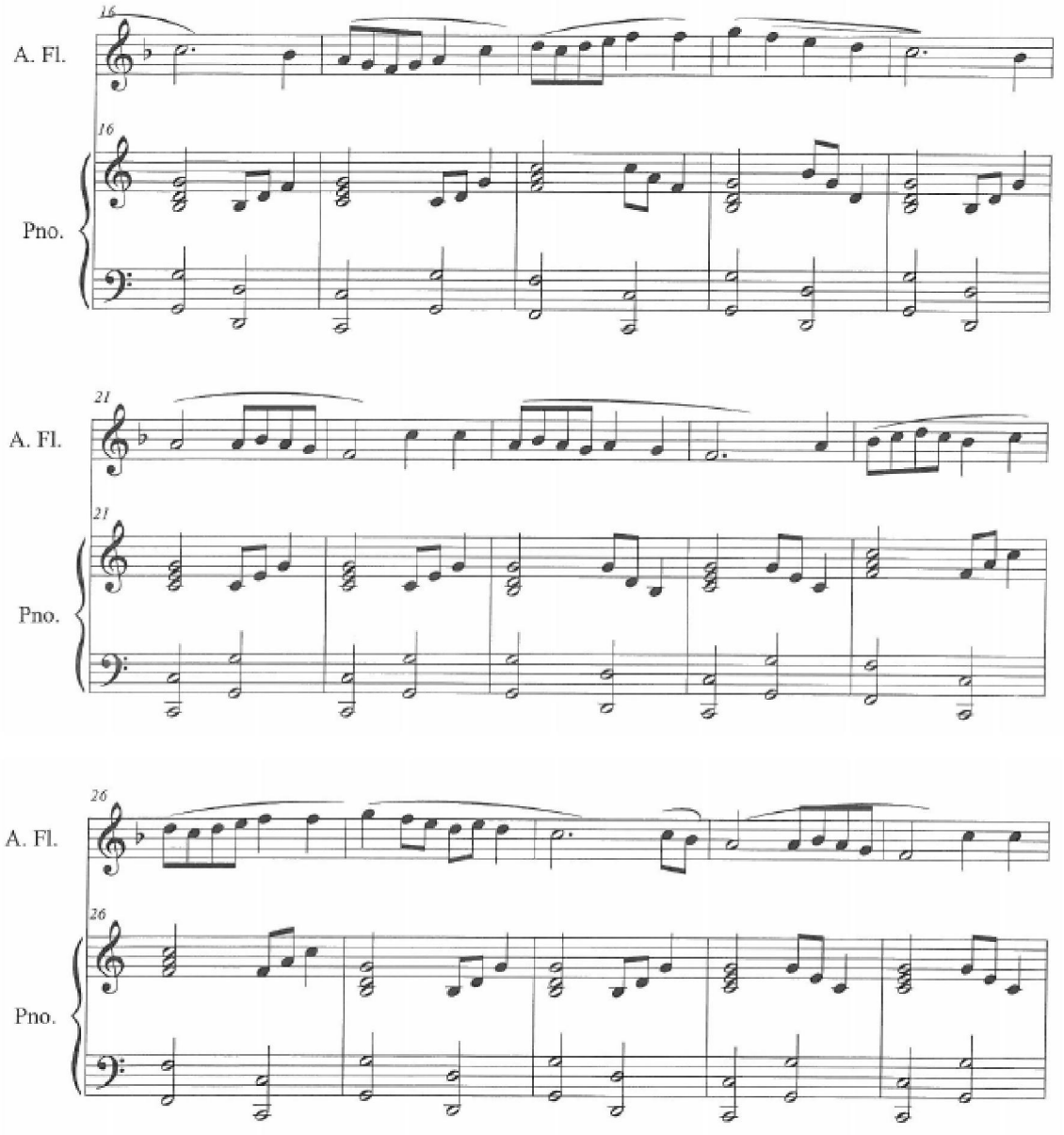
| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No burnout | | Moderate burnout | | Burned out |

**[Complete SOS and the ProQOL]**

**APPENDIX C**

**Music for Trio**

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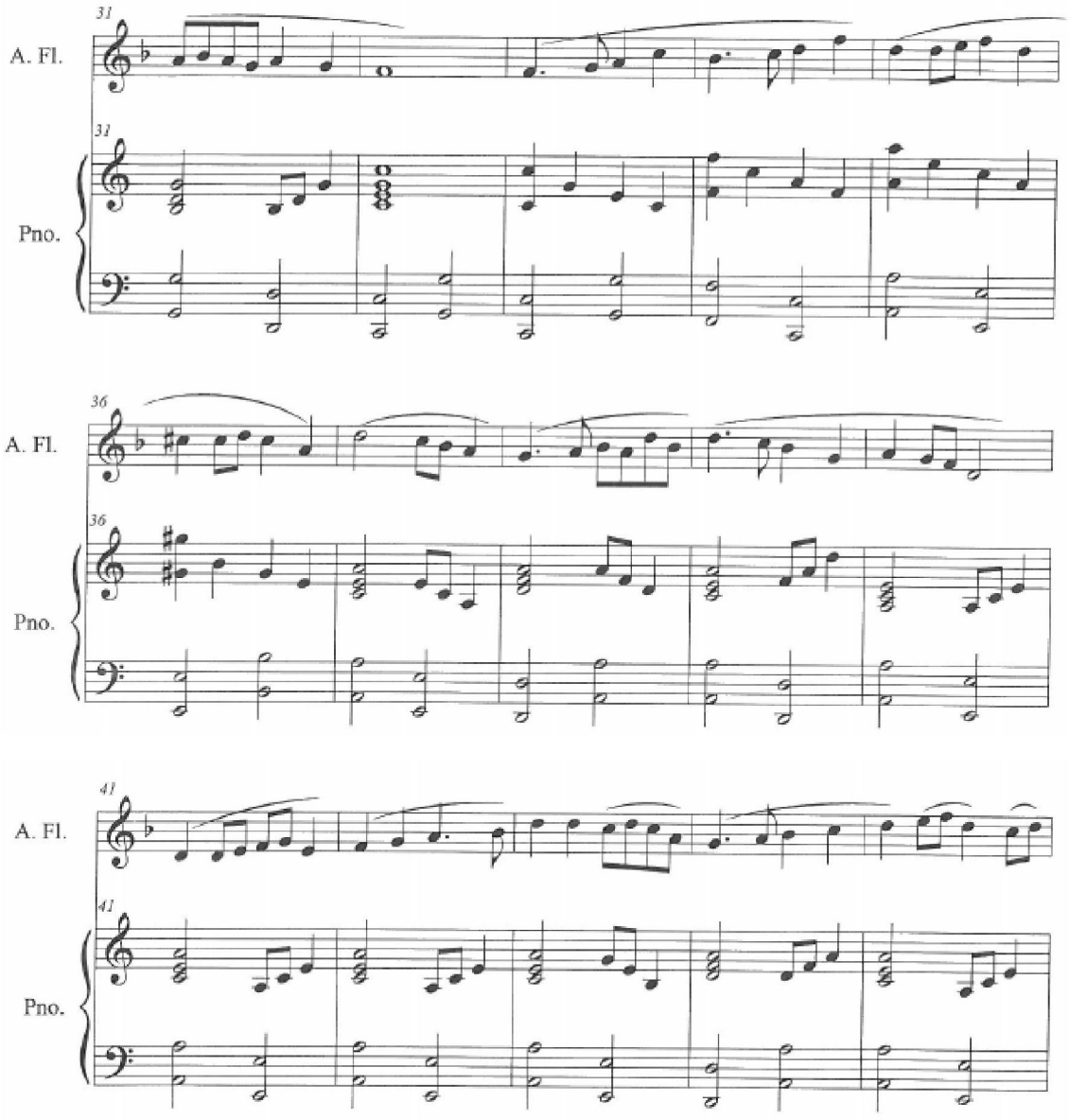
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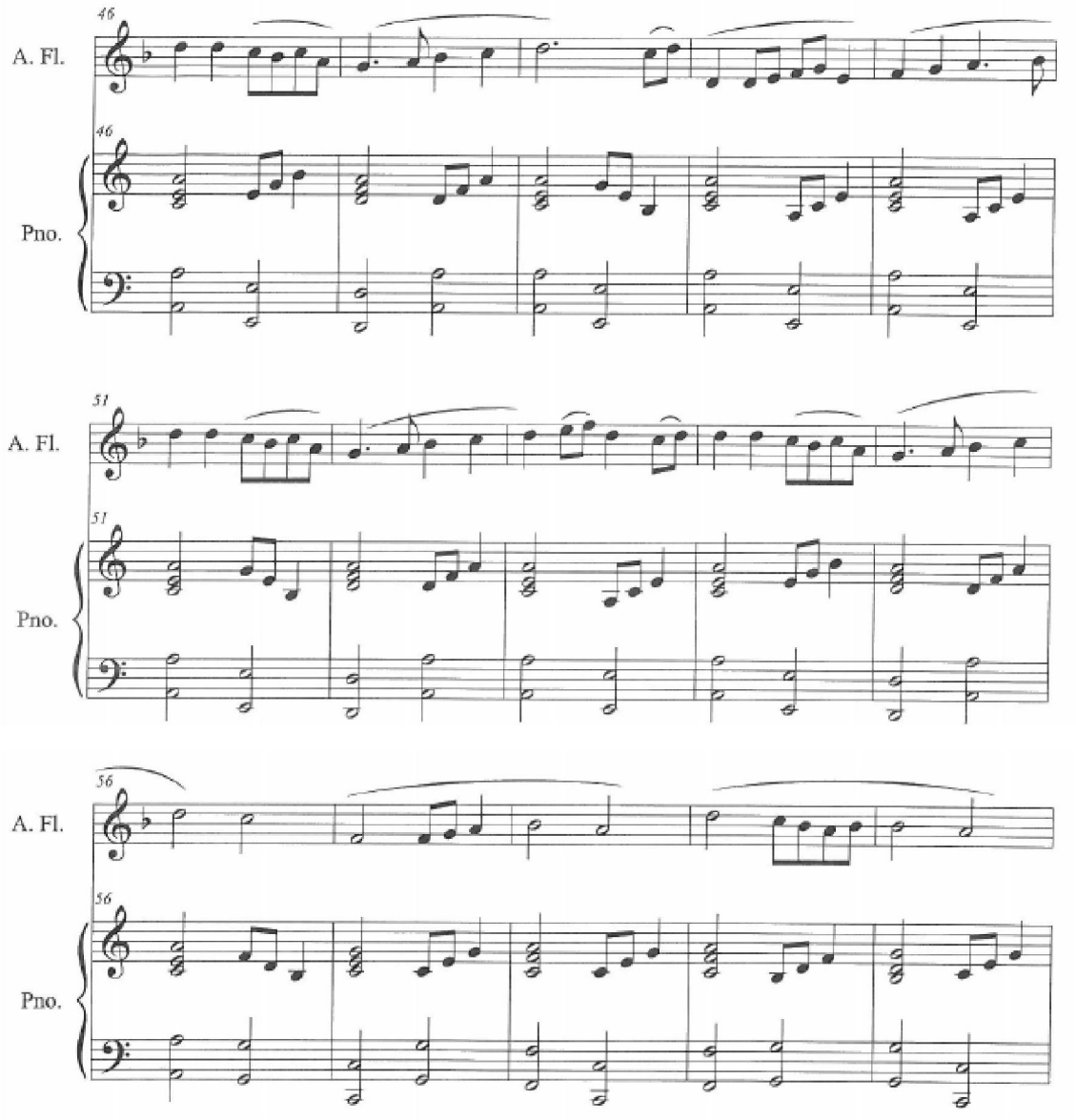
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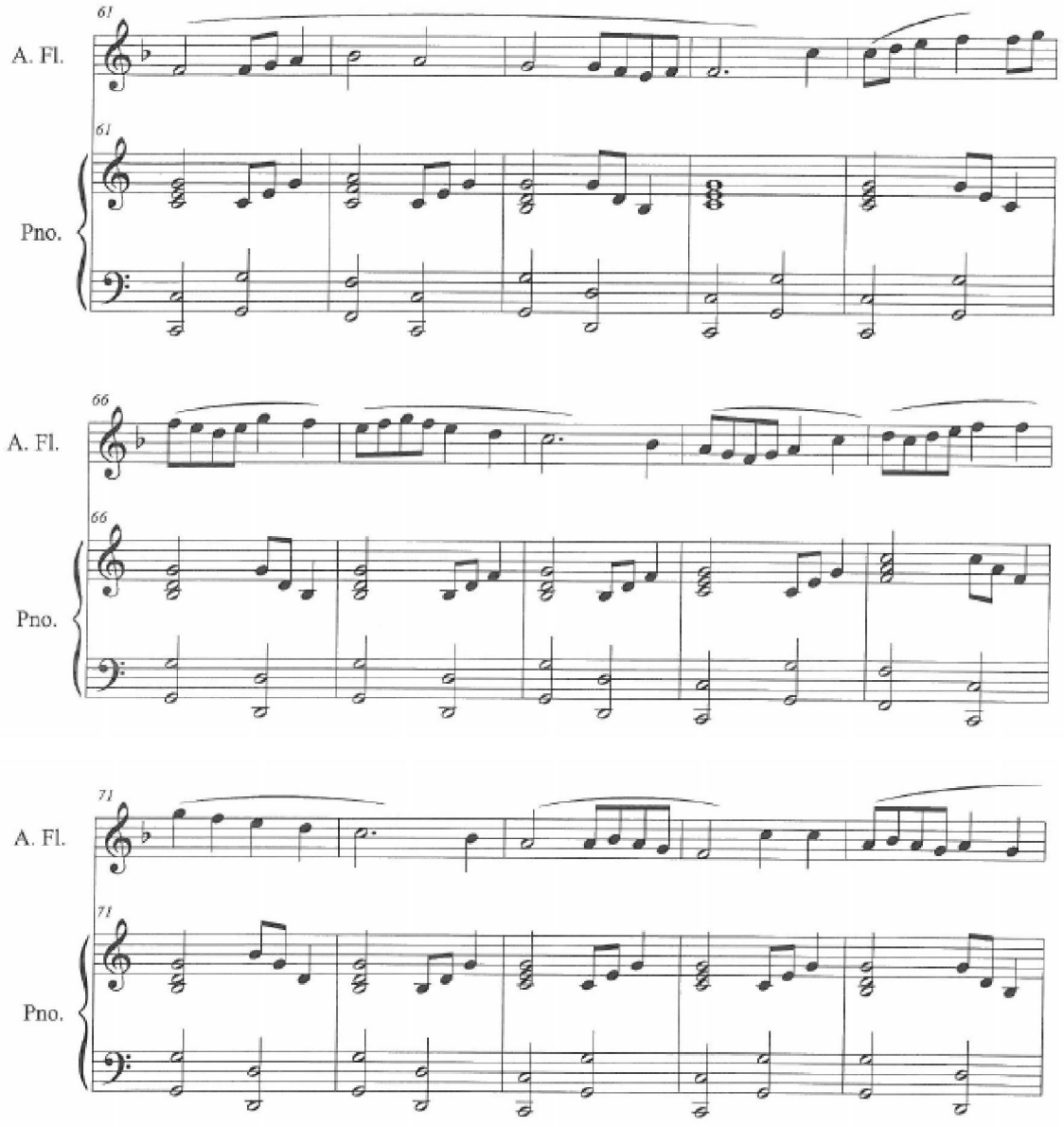
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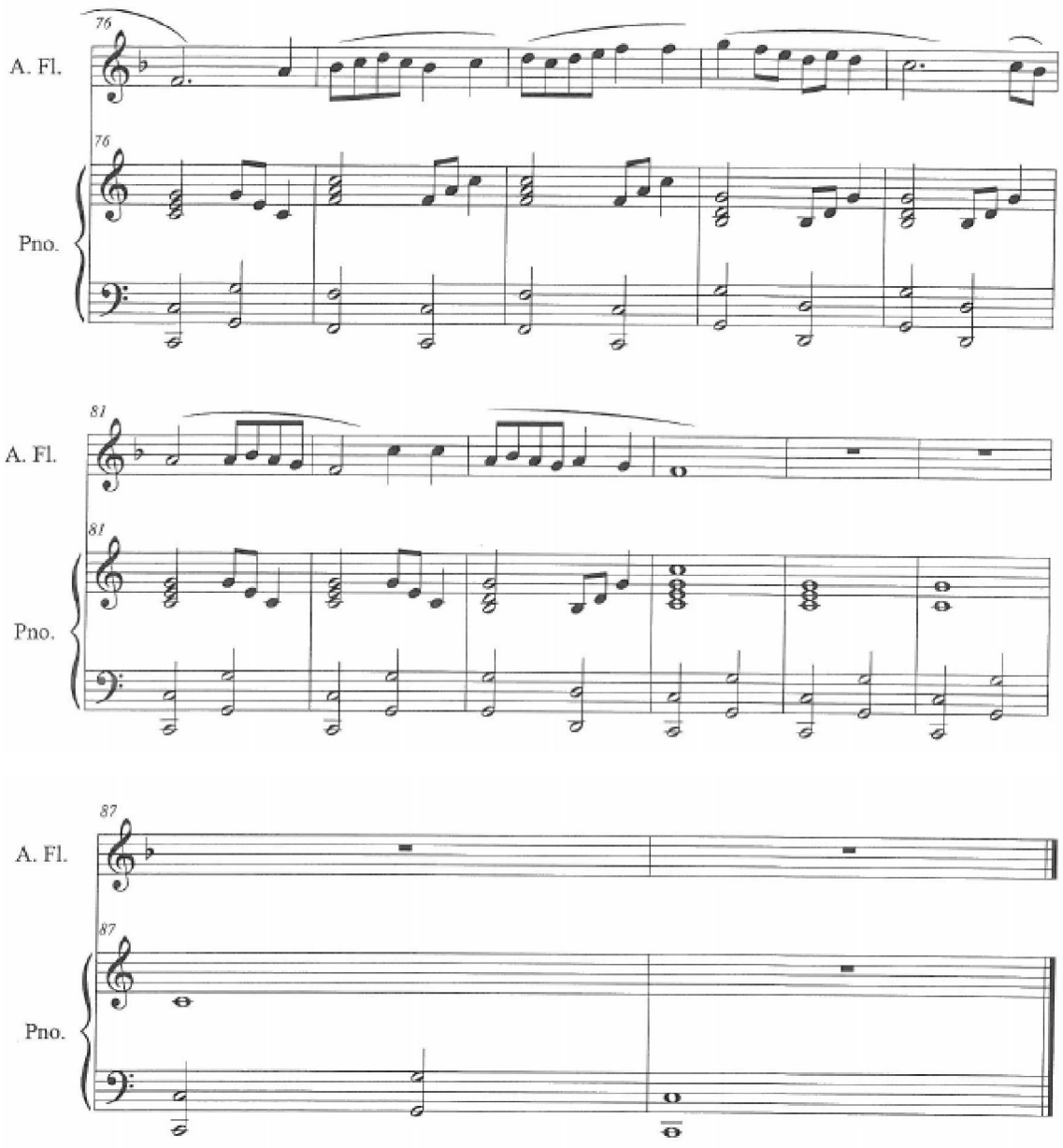
Pno.


76
A. Fl.
76
Pno.
81
A. Fl.
81
Pno.
87
A. Fl.
87
Pno.

## APPENDIX D

## Mindfulness-Based Intervention Questionnaire

Unique ID number: _____

Age _____

Gender: Male or Female

Professional discipline (check one):

Physicians (DR) Advanced Practice Nurse (APN) Registered Nurses (RN) Licensed Practical Nurses (LPN) Home-health Aides (HHA) Care Partners (CP)

Social Workers (SW) Chaplains (CHP)

Length of time in profession: _____

Length of time working in hospice: _____

Primary work setting: Hospice House or field staff

Number of hours worked per week in hospice: _____

Number of hours worked during current shift at time of participation: _____

Number of hours worked concurrently at jobs other than hospice: _____

Number of times healthcare was accessed for self over the last month: _____

Number of work hours missed in last month due to your illness: _____

Perceived level of control in his/her job

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No control | | Moderate control | | Lots of control |

Perceived level of stress

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No stress | | Moderate stress | | High stress |

Narrative identification of current stressors: _____

_____

Perceived level of burnout

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No burnout | | Moderate burnout | | Burned out |

Current coping methods (Check all that apply):

Meditation
Music for relaxation
Yoga
Exercise
Journal
Faith
Other: _____

**[Complete SOS and ProQOL]**

***Online Mindfulness-Based Intervention***

**Post Intervention**

While listening, I… (check all that apply)

Closed my eyes
Actively listened
Meditated
Practiced deep breathing
Pictured images in my mind
Other: _____

Where did you listen?

Desk
Car
Office
Outside
Home
Other: _____

How did you listen? (check all that apply)

Headphones
Earbuds
Smartphone
Computer
iPad or Tablet
Speakers

What element(s) of the mindfulness did you find the most effective? (check all that apply)

Timbre (sound of voice)
Rhythm (timing of musical sounds and silence)
Tempo (pace of the music)
Other: _____

What element(s) of the mindfulness did you find the least effective? (check all that apply)

Timbre (sound of voice)
Rhythm (timing of sounds and silence)
Tempo (pace of the speaking)
Other: _____

Do you feel an online intervention is beneficial? Yes or No

Explain: _____

Would you continue to use an online intervention if it was provided or encouraged by the agency?

Yes No Maybe

Would you continue to use an online intervention on your own?

Yes No Maybe

What affected you engaging in the intervention? (Check all that apply):

Workload
Available time
Environment
Other people present
Not a preferred type of intervention
Other: _____

What could make implementation easier in the future? _____

_____

What intervention(s) would you be more likely to use in the future?

Music
Meditation
Both
Neither

Perceived level of control in his/her job

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No control | | Moderate control | | Lots of control |

Perceived level of stress

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No stress | | Moderate stress | | High stress |

Perceived level of burnout

| 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|
| No burnout | | Moderate burnout | | Burned out |

**[Complete SOS and the ProQOL]**

## APPENDIX E

## Mindfulness Script

So find a relaxed, comfortable position, seated on a chair, or on the floor, on a cushion.

Keep your back upright, but not too tight. Hands resting wherever they're comfortable.

Tongue on the roof of your mouth, or wherever it's comfortable.

And you can notice your body…from the inside. Noticing the shape of your body, weight, touch.

And let yourself relax and become curious about your body…seated here. The sensations of your body, the touch. The connection with the floor or the chair.

Relax any areas of tightness or tension. Just breathe and soften.

Now begin to tune into your breath in your body. Feeling the natural flow of breath.

Don't need to do anything to your breath, not long not short, just natural. And notice where you feel your breath in your body.

It might be in your abdomen, it may be in your chest or throat, or in your nostrils. See if you can feel the sensations of breath, one breath at a time.

When one breath ends, the next breath begins.

Now as you do this, you might notice that your mind may start to wander. You might start thinking about other things. If this happens, this is not a problem, it's very natural. Just notice that your mind has wandered. You can say thinking or wandering in your head softly. And then gently redirect your attention right back to the breathing.

So we'll stay with this for some time in silence. Just a short time. Noticing our breath from time to time, getting lost in thought, and returning to our breath. See if you can be really kind to yourself in the process. (52 second pause)

And once again you can notice your body, your whole body seated here. Let yourself relax even more deeply. And then offer yourself some appreciation for doing this practice today. Whatever that means to you. Finding a sense of ease and wellbeing for yourself and this day.

(Bell rings)

## APPENDIX F

## Stress Overload Scale

You will find questions about your feelings during the **PAST WEEK**. Please answer every question, even though some might sound familiar. Each question names a particular feeling that is common to people as they go through their everyday lives.

Please check the one box that shows how much you have felt the particular feeling in the last week. For example, you might select the last option if you had the feeling a lot. Or, you might select the second option if you felt that way, just a little bit.

Remember, please consider only your feelings **IN THE PAST WEEK**.

**IN THE PAST WEEK, have you felt:**

| | | | | | |
|---|---|---|---|---|---|
| 1...calm? | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |
| 2...strained? | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |
| 3...inadequate? | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |
| 4...overextended? | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |
| 5...confident? | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |
| 6...bored? | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |
| 7...no sense of getting ahead? | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |
| 8...swamped by your responsibilities? | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |
| 9...that the odds were against you? | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |

10...that there wasn't enough time to get to everything?

| | | | | | |
|---|---|---|---|---|---|
| | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |

11...generous?

| | | | | | |
|---|---|---|---|---|---|
| | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |

12...like you were rushed?

| | | | | | |
|---|---|---|---|---|---|
| | ☐ | ☐ | ☐ | ☐ | ☐ |
| | Not At All | | | | A Lot |

The entirety of the Stress Overload Scale was not included per request of James Amirkhan, Ph.D. as seen in the letter of permission below.

**Re: Stress Overload Scale**
James Amirkhan [james.amirkhan@csulb.edu]
**Sent:** Tuesday, March 04, 2014 5:44 PM
**To:** Fiore, Jennifer
**Attachments:** NEW SOS + Scoring Formatted.pdf (84 KB) ; SOS Description.rtf (8 KB) ; CSI-All.pdf (1 MB) ; CSI Description.pdf (90 KB)

Dear Dr. Fiore:

Thank you for your interest in the Stress Overload Scale. I have attached the measure with its scoring scheme. You are welcome to use the SOS free of charge in your research, and I would be very interested to see any results you obtain with it. However, I do ask (1) that you use the instrument for research purposes only, and (2) that you do not publish the instrument in its entirety (including sample items in your write-up is fine). I have had some problems with people using my scales for profit without my knowledge or consent.

I have also attached a short summary of the SOS. I can also send you a copy of the original articles, which describes its derivation, and in which the bulk of the normative data is presented, of you don't already have it.

Years ago (Amirkhan, 1990), I published a coping measure that, like the SOS, is empirically derived. The Coping Strategy Indicator (CSI) provides a profile of each respondent in terms of their use of three basic strategies: Problem Solving, Seeking Support, and Avoidance. I thought this might also be of use to you, so I am attaching the scale and a short description.

Best of luck with your project!

Sincerely,

James H. Amirkhan, Ph.D.
Professor of Psychology

## APPENDIX G

## Professional Quality of Life Scale (ProQOL)

Compassion Satisfaction and Compassion Fatigue (ProQOL) Version 5 (2009)



When you [help] people you have direct contact with their lives. As you may have found, your compassion for those you [help] can affect you in positive and negative ways. Below are some questions about your experiences, both positive and negative, as a [helper]. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the *last 30 days*.

1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

_____ 1. I am happy.
_____ 2. I am preoccupied with more than one person I [help].
_____ 3. I get satisfaction from being able to [help] people.
_____ 4. I feel connected to others.
_____ 5. I jump or am startled by unexpected sounds.
_____ 6. I feel invigorated after working with those I [help].
_____ 7. I find it difficult to separate my personal life from my life as a [helper].
_____ 8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I [help].
_____ 9. I think that I might have been affected by the traumatic stress of those I [help].
_____ 10. I feel trapped by my job as a [helper].
_____ 11. Because of my [helping], I have felt "on edge" about various things.
_____ 12. I like my work as a [helper].
_____ 13. I feel depressed because of the traumatic experiences of the people I [help].
_____ 14. I feel as though I am experiencing the trauma of someone I have [helped].
_____ 15. I have beliefs that sustain me.
_____ 16. I am pleased with how I am able to keep up with [helping] techniques and protocols.
_____ 17. I am the person I always wanted to be.
_____ 18. My work makes me feel satisfied.
_____ 19. I feel worn out because of my work as a [helper].
_____ 20. I have happy thoughts and feelings about those I [help] and how I could help them.
_____ 21. I feel overwhelmed because my case [work] load seems endless.
_____ 22. I believe I can make a difference through my work.
_____ 23. I avoid certain activities or situations because they remind me of frightening experiences of the people I [help].

_____ 24. I am proud of what I can do to [help].
_____ 25. As a result of my [helping], I have intrusive, frightening thoughts.
_____ 26. I feel "bogged down" by the system.
_____ 27. I have thoughts that I am a "success" as a [helper].
_____ 28. I can't recall important parts of my work with trauma victims.
_____ 29. I am a very caring person.
_____ 30. I am happy that I chose to do this work.